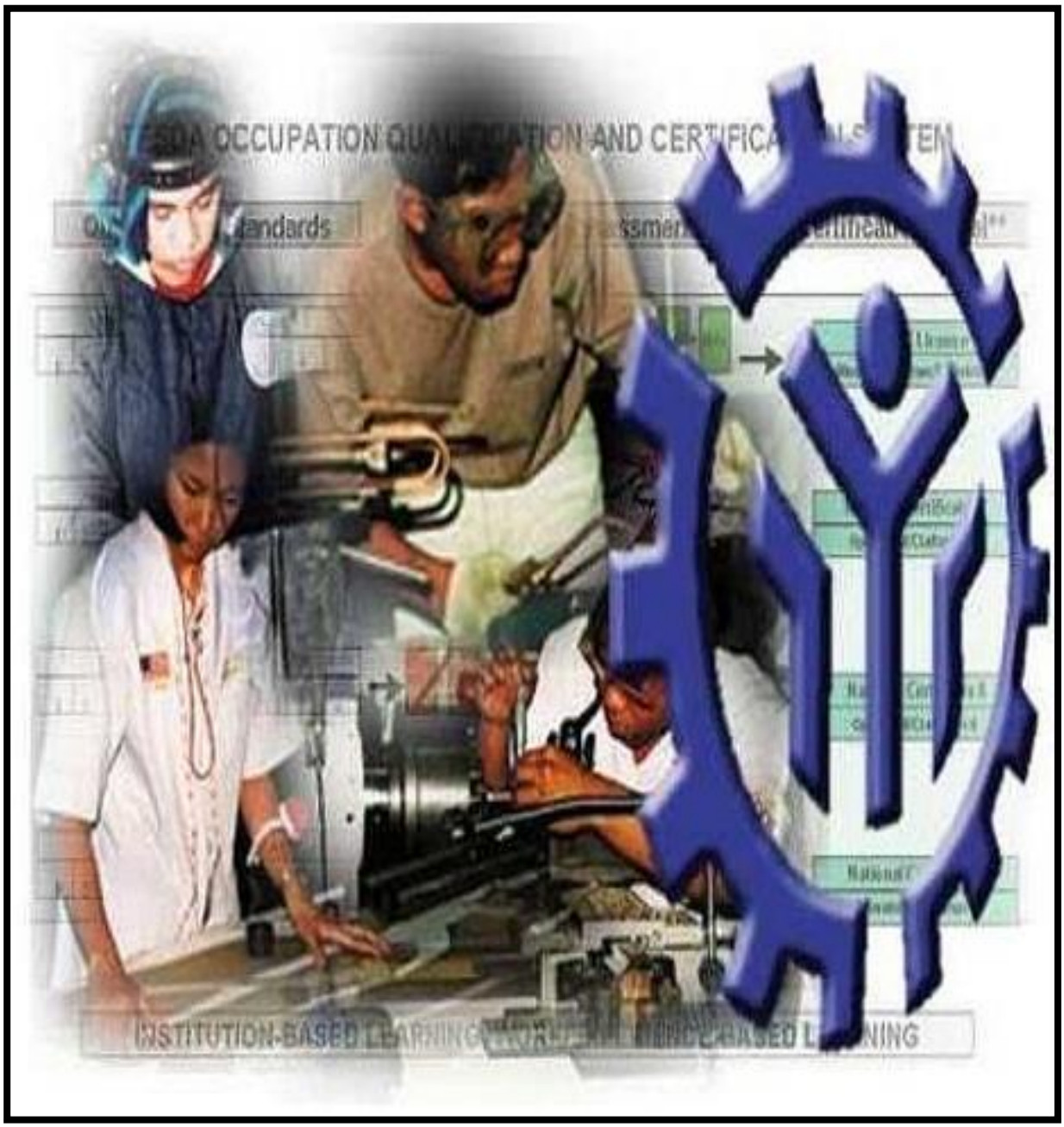
TRAINING REGULATIONS

AUTOMOTIVE BODY REPAIRING
NC II



AUTOMOTIVE AND LAND TRANSPORT SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
TESDA Complex East Service Road, South Luzon Expressway (SLEX),
Fort Bonifacio, Taguig City

Technical Education and Skills Development Act of 1994
(Republic Act No. 7796)

Section 22, “Establishment and Administration of the National Trade Skills Standards” of the RA 7796 known as the TESDA Act mandates TESDA to establish national occupational skill standards. The Authority shall develop and implement a certification and accreditation program in which private industry group and trade associations are accredited to conduct approved trade tests, and the local government units to promote such trade testing activities in their respective areas in accordance with the guidelines to be set by the Authority.

The Training Regulations (TR) serve as basis for the:

1. Competency assessment and certification;
2. Registration and delivery of training programs; and
3. Development of curriculum and assessment instruments.

Each TR has four sections:

Section 1 **Definition of Qualification** - describes the qualification and defines the competencies that comprise the qualification.

Section 2 **Competency Standards** - was revised to include the Required Knowledge and Required Skills per element. These fields explicitly state the required knowledge and skills for competent performance of a unit of competency in an informed and effective manner. These also emphasize the application of knowledge and skills to situations where understanding is converted into a workplace outcome.

Section 3 **Training Arrangements** - contain the information and requirements which serve as bases for training providers in designing and delivering competency-based curriculum for the qualification. The revisions to Section 3 entail identifying the Learning Activities leading to achievement of the identified Learning Outcome.

Section 4 **Assessment and Certification Arrangements** - describe the policies governing assessment and certification procedures for the qualification.

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TRAINING REGULATIONS FOR

AUTOMOTIVE BODY REPAIRING NC II

SECTION 1 AUTOMOTIVE BODY REPAIRING NC II QUALIFICATION

The **AUTOMOTIVE BODY REPAIRING NC II** Qualification consists of competencies that a person must achieve to remove and store vehicle body components, replace and repair vehicle body panels and components and repair vehicle body panels using filler (rough finish).

This Qualification is packaged from the competency map of the Automotive and Land Transport Sector as shown in Annex A.

The Units of Competency comprising this Qualification include the following:

CODE NO.	BASIC COMPETENCIES
400311210	Participate in workplace communication
400311211	Work in team environment
400311212	Solve/address general workplace problems
400311213	Develop career and life decisions
400311214	Contribute to workplace innovation
400311215	Present relevant information
400311216	Practice occupational safety and health policies and procedures
400311217	Exercise efficient and effective sustainable practices in the workplace
400311218	Practice entrepreneurial skills in the workplace
CODE NO.	**COMMON COMPETENCIES**
ALT723211	Validate vehicle specification
ALT723212	Move and position vehicle
ALT723214	Utilize automotive tools
ALT723215	Perform mensuration and calculation
ALT723216	Utilize workshop facilities and equipment
ALT723217	Prepare servicing parts and consumables
ALT723218	Prepare vehicle for servicing and releasing
CODE NO.	**CORE COMPETENCIES**
ALT213304	Remove and store vehicle body components
ALT213305	Replace and repair vehicle body panels and components
ALT213306	Repair vehicle body panels using filler (rough finish)

A person who has achieved this Qualification is competent to be:

- Body Repair Personnel
- Tinsmith
- Body Repair Technician

SECTION 2 COMPETENCY STANDARDS

This section gives the details of the contents of the basic, common and core units of competency required in **AUTOMOTIVE BODY REPAIRING NC II**.

BASIC COMPETENCIES

UNIT OF COMPETENCY : **PARTICIPATE IN WORKPLACE COMMUNICATION**

UNIT CODE : **400311210**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from ***appropriate sources***. 1.2 Effective questioning, active listening and speaking skills are used to gather and convey information. 1.3 Appropriate ***medium*** is used to transfer information and ideas. 1.4 Appropriate non-verbal communication is used. 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed. 1.6 Defined workplace procedures for the location and ***storage*** of information are used.	1.1 Effective verbal and nonverbal communication 1.2 Different modes of communication 1.3 Medium of communication in the workplace 1.4 Organizational policies 1.5 Communication procedures and systems 1.6 Lines of Communication 1.7 Technology relevant to the enterprise and the individual's work responsibilities 1.8 Workplace etiquette	1.1 Following simple spoken language 1.2 Performing routine workplace duties following simple written notices 1.3 Participating in workplace meetings and discussions 1.4 Preparing work-related documents 1.5 Estimating, calculating and recording routine workplace measures 1.6 Relating/ Interacting with people of various levels in the workplace 1.7 Gathering and providing basic information in response to workplace requirements

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	1.7 Personal interaction is carried out clearly and concisely.		1.8 Basic business writing skills 1.9 Interpersonal skills in the workplace 1.10 Active-listening skills
2. Perform duties following workplace instructions	2.1 Written notices and instructions are read and interpreted in accordance with organizational guidelines. 2.2 Routine written instruction are followed based on established procedures. 2.3 Feedback is given to workplace supervisor based instructions/ information received. 2.4 ***Workplace interactions*** are conducted in a courteous manner. 2.5 Where necessary, clarifications about routine workplace procedures and matters concerning conditions of employment are sought and asked from ***appropriate sources***. 2.6 Meetings outcomes are interpreted and implemented.	2.1 Effective verbal and non-verbal communication 2.2 Different modes of communication 2.3 Medium of communication in the workplace 2.4 Organizational/ Workplace policies 2.5 Communication procedures and systems 2.6 Lines of communication 2.7 Technology relevant to the enterprise and the individual's work responsibilities 2.8 Effective questioning techniques (clarifying and probing) 2.9 Workplace etiquette	2.1 Following simple spoken instructions 2.2 Performing routine workplace duties following simple written notices 2.3 Participating in workplace meetings and discussions 2.4 Completing work- related documents 2.5 Estimating, calculating and recording routine workplace measures 2.6 Relating/ Responding to people of various levels in the workplace 2.7 Gathering and providing information in response to workplace requirements 2.8 Basic questioning/ querying 2.9 Skills in reading for information 2.10 Skills in locating
3. Complete relevant work-related documents	3.1 Range of ***forms*** relating to conditions of employment are completed	3.1 Effective verbal and non-verbal communication 3.2 Different modes of communication	3.1 Completing work-related documents 3.2 Applying operations of

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	accurately and legibly. 3.2 Workplace data is recorded on standard workplace forms and documents. 3.3 Errors in recording information on forms/ documents are identified and acted upon. 3.4 Reporting requirements to supervisor are completed according to organizational guidelines.	3.3 Workplace forms and documents 3.4 Organizational/ Workplace policies 3.5 Communication procedures and systems 3.6 Technology relevant to the enterprise and the individual's work responsibilities	addition, subtraction, division and multiplication 3.3 Gathering and providing information in response to workplace requirements 3.4 Effective record keeping skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. Appropriate sources	May include: 1.1 Team members 1.2 Supervisor/Department Head 1.3 Suppliers 1.4 Trade personnel 1.5 Local government 1.6 Industry bodies
2. Medium	May include: 2.1 Memorandum 2.2 Circular 2.3 Notice 2.4 Information dissemination 2.5 Follow-up or verbal instructions 2.6 Face-to-face communication 2.7 Electronic media (disk files, cyberspace)
3. Storage	May include: 3.1 Manual filing system 3.2 Computer-based filing system
4. Workplace interactions	May include: 4.1 Face-to-face 4.2 Telephone 4.3 Electronic and two-way radio 4.4 Written including electronic means, memos, instruction and forms 4.5 Non-verbal including gestures, signals, signs and diagrams
5. Forms	May include: 5.1 HR/Personnel forms, telephone message forms, safety reports

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Prepared written communication following standard format of the organization 1.2 Accessed information using workplace communication equipment/systems 1.3 Made use of relevant terms as an aid to transfer information effectively 1.4 Conveyed information effectively adopting formal or informal communication
2. Resource Implications	**The following resources should be provided:** 2.1 Fax machine 2.2 Telephone 2.3 Notebook 2.4 Writing materials 2.5 Computer with Internet connection
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Demonstration with oral questioning 3.2 Interview 3.3 Written test 3.4 Third-party report
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or through an accredited institution

UNIT OF COMPETENCY : WORK IN TEAM ENVIRONMENT

UNIT CODE : 400311211

UNIT DESCRIPTOR : This unit covers the skills, knowledge and attitudes to identify one's roles and responsibilities as a member of a team.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Describe team role and scope	1.1 The ***role and objective of the team*** is identified from available ***sources of information***. 1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources.	1.1 Group structure 1.2 Group development 1.3 Sources of information	1.1 Communicating with others, appropriately consistent with the culture of the workplace 1.2 Developing ways in improving work structure and performing respective roles in the group or organization
2. Identify one's role and responsibility within a team	2.1 Individual roles and responsibilities within the team environment are identified. 2.2 Roles and objectives of the team is identified from available ***sources of information***. 2.3 Team parameters, reporting relationships and responsibilities are identified based on team discussions and appropriate external sources.	2.1 Team roles and objectives 2.2 Team structure and parameters 2.3 Team development 2.4 Sources of information	2.1 Communicating with others, appropriately consistent with the culture of the workplace 2.2 Developing ways in improving work structure and performing respective roles in the group or organization
3. Work as a team member	3.1 Effective and appropriate forms of communications are used and interactions undertaken with	3.1 Communication Process 3.2 Workplace communication protocol	3.1 Communicating appropriately, consistent with the culture of the workplace

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	team members based on company practices. 3.2 Effective and appropriate contributions made to complement team activities and objectives, based on ***workplace context***. 3.3 Protocols in reporting are observed based on standard company practices. 3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives.	3.3 Team planning and decision making 3.4 Team thinking 3.5 Team roles 3.6 Process of team development 3.7 Workplace context	3.2 Interacting effectively with others 3.3 Deciding as an individual and as a group using group think strategies and techniques 3.4 Contributing to Resolution of issues and concerns

RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	May include: 1.1 Work activities in a team environment with enterprise or specific sector 1.2 Limited discretion, initiative and judgement maybe demonstrated on the job, either individually or in a team environment
2. Sources of information	May include: 2.1 Standard operating and/or other workplace procedures 2.2 Job procedures 2.3 Machine/equipment manufacturer's specifications and instructions 2.4 Organizational or external personnel 2.5 Client/supplier instructions 2.6 Quality standards 2.7 OHS and environmental standards
3. Workplace context	May include: 3.1 Work procedures and practices 3.2 Conditions of work environments 3.3 Legislation and industrial agreements 3.4 Standard work practice including the storage, safe handling and disposal of chemicals 3.5 Safety, environmental, housekeeping and quality guidelines

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Worked in a team to complete workplace activity 1.2 Worked effectively with others 1.3 Conveyed information in written or oral form 1.4 Selected and used appropriate workplace language 1.5 Followed designated work plan for the job
2. Resource Implications	**The following resources should be provided:** 2.1 Access to relevant workplace or appropriately simulated environment where assessment can take place 2.2 Materials relevant to the proposed activity or tasks
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Role play involving the participation of individual member to the attainment of organizational goal 3.2 Case studies and scenarios as a basis for discussion of issues and strategies in teamwork 3.3 Socio-drama and socio-metric methods 3.4 Sensitivity techniques 3.5 Written Test
4. Context for Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while task are being undertaken whether individually or in group

UNIT OF COMPETENCY : **SOLVE/ADDRESS GENERAL WORKPLACE PROBLEMS**

UNIT CODE : **400311212**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to apply problem-solving techniques to determine the origin of problems and plan for their resolution. It also includes addressing procedural problems through documentation, and referral.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify routine problems	1.1 Routine **problems or procedural problem** areas are identified. 1.2 Problems to be investigated are defined and determined. 1.3 Current conditions of the problem are identified and documented.	1.1 Current industry hardware and software products and services 1.2 Industry maintenance, service and helpdesk practices, processes and procedures 1.3 Industry standard diagnostic tools 1.4 Malfunctions and resolutions	1.1 Identifying current industry hardware and software products and services 1.2 Identifying current industry maintenance, services and helpdesk practices, processes and procedures. 1.3 Identifying current industry standard diagnostic tools 1.4 Describing common malfunctions and resolutions. 1.5 Determining the root cause of a routine malfunction
2. Look for solutions to routine problems	2.1 Potential solutions to problem are identified. 2.2 Recommendations about possible solutions are developed, **documented**, ranked and presented to	2.1 Current industry hardware and software products and services 2.2 Industry service and helpdesk practices, processes and procedures	2.1 Identifying current industry hardware and software products and services 2.2 Identifying services and helpdesk practices,

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	appropriate person for decision.	2.3 Operating systems 2.4 Industry standard diagnostic tools 2.5 Malfunctions and resolutions. 2.6 Root cause analysis	processes and procedures. 2.3 Identifying operating system 2.4 Identifying current industry standard diagnostic tools 2.5 Describing common malfunctions and resolutions. 2.6 Determining the root cause of a routine malfunction
3. Recommend solutions to problems	3.1 Implementation of solutions are **planned**. 3.2 Evaluation of implemented solutions are planned. 3.3 Recommended solutions are documented and submit to appropriate person for confirmation.	3.1 Standard procedures 3.2 Documentation produce	3.1 Producing documentation that recommends solutions to problems 3.2 Following established procedures

RANGE OF VARIABLES

VARIABLE	RANGE
1. Problems/Procedural Problem	May include: 1.1 Routine/non – routine processes and quality problems 1.2 Equipment selection, availability and failure 1.3 Teamwork and work allocation problem 1.4 Safety and emergency situations and incidents 1.5 Work-related problems outside of own work area
2. Appropriate person	May include: 2.1 Supervisor or manager 2.2 Peers/work colleagues 2.3 Other members of the organization
3. Document	May include: 3.1 Electronic mail 3.2 Briefing notes 3.3 Written report 3.4 Evaluation report
4. Plan	May include: 4.1 Priority requirements 4.2 Co-ordination and feedback requirements 4.3 Safety requirements 4.4 Risk assessment 4.5 Environmental requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Determined the root cause of a routine problem 1.2 Identified solutions to procedural problems. 1.3 Produced documentation that recommends solutions to problems. 1.4 Followed established procedures. 1.5 Referred unresolved problems to support persons.
2. Resource Implications	2.1 Assessment will require access to a workplace over an extended period, or a suitable method of gathering evidence of operating ability over a range of situations.
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Case Formulation 3.2 Life Narrative Inquiry 3.3 Standardized test The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : DEVELOP CAREER AND LIFE DECISIONS

UNIT CODE : 400311213

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes in managing one's emotions, developing reflective practice, and boosting self-confidence and developing self-regulation.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Manage one's emotion	1.1 **Self-management strategies** are identified. 1.2 Skills to work independently and to show initiative, to be conscientious, and persevering in the face of setbacks and frustrations are developed. 1.3 Techniques for effectively handling negative emotions and **unpleasant situation i**n the workplace are examined.	1.1 Self-management strategies that assist in regulating behavior and achieving personal and learning goals (e.g. Nine self-management strategies according to Robert Kelley) 1.2 Enablers and barriers in achieving personal and career goals 1.3 Techniques in handling negative emotions and unpleasant situation in the workplace such as frustration, anger, worry, anxiety, etc.	1.1 Managing properly one's emotions and recognizing situations that cannot be changed and accept them and remain professional 1.2 Developing self-discipline, working independently and showing initiative to achieve personal and career goals 1.3 Showing confidence, and resilience in the face of setbacks and frustrations and other negative emotions and unpleasant situations in the workplace
2. Develop reflective practice	2.1 Personal strengths and achievements, based on self-assessment strategies and teacher feedback are contemplated. 2.2 Progress when seeking and	2.1 Basic SWOT analysis 2.2 Strategies to improve one's attitude in the workplace 2.3 Gibbs' Reflective Cycle/Model (Description,	2.1 Using the basic SWOT analysis as self-assessment strategy 2.2 Developing reflective practice through realization of

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	responding to feedback from teachers to assist them in consolidating strengths, addressing weaknesses and fulfilling their potential are monitored. 2.3 Outcomes of personal and academic challenges by reflecting on previous problem solving and decision making strategies and feedback from peers and teachers are predicted.	Feelings, Evaluation, Analysis, Conclusion, and Action plan)	limitations, likes/ dislikes; through showing of self-confidence 2.3 Demonstrating self-acceptance and being able to accept challenges
3. Boost self-confidence and develop self-regulation	3.1 Efforts for continuous self-improvement are demonstrated. 3.2 Counter-productive tendencies at work are eliminated. 3.3 Positive outlook in life are maintained.	3.1 Four components of self-regulation based on Self-Regulation Theory (SRT) 3.2 Personality development concepts 3.3 Self-help concepts (e. g., 7 Habits by Stephen Covey, transactional analysis, psycho-spiritual concepts)	3.1 Performing effective communication skills – reading, writing, conversing skills 3.2 Showing affective skills – flexibility, adaptability, etc. 3.3 Self-assessment for determining one's strengths and weaknesses

RANGE OF VARIABLES

VARIABLE	RANGE
1. Self-management strategies	May include: 1.1 Seeking assistance in the form of job coaching or mentoring 1.2 Continuing dialogue to tackle workplace grievances 1.3 Collective negotiation/bargaining for better working conditions 1.4 Share your goals to improve with a trusted co-worker or supervisor 1.5 Make a negativity log of every instance when you catch yourself complaining to others 1.6 Make lists and schedules for necessary activities
2. Unpleasant situation	May include: 2.1 Job burn-out 2.2 Drug dependence 2.3 Sulking

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Express emotions appropriately 1.2 Work independently and show initiative 1.3 Consistently demonstrate self-confidence and self-discipline
2. Resource Implications	**The following resources should be provided:** 2.1 Access to workplace and resources 2.2 Case studies
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Demonstration or simulation with oral questioning 3.2 Case problems involving work improvement and sustainability issues 3.3 Third-party report
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment

UNIT OF COMPETENCY : CONTRIBUTE TO WORKPLACE INNOVATION

UNIT CODE : 400311214

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to make a pro-active and positive contribution to workplace innovation.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify opportunities to do things better	1.1 ***Opportunities for improvement*** are identified proactively in own area of work. 1.2 ***Information*** are gathered and reviewed which may be relevant to ideas and which might assist in gaining support for idea.	1.1 Roles of individuals in suggesting and making improvements. 1.2 Positive impacts and challenges in innovation. 1.3 Types of changes and responsibility. 1.4 Seven habits of highly effective people.	1.1 Identifying opportunities to improve and to do things better. Involvement 1.2 Identifying the positive impacts and the challenges of change and innovation 1.3 Identifying examples of the types of changes that are within and outside own scope of responsibility
2. Discuss and develop ideas with others	2.1 ***People who could provide input*** to ideas for improvements are identified. 2.2 Ways of approaching people to begin sharing ideas are selected. 2.3 Meeting is set with relevant people. 2.4 Ideas for follow up are review and selected based on feedback. 2.5 ***Critical inquiry method*** is used to discuss and develop ideas with others.	2.1 Roles of individuals in suggesting and making improvements 2.2 Positive impacts and challenges in innovation 2.3 Types of changes and responsibility. 2.4 Seven habits of highly effective people	2.1 Identifying opportunities to improve and to do things better. Involvement 2.2 Identifying the positive impacts and the challenges of change and innovation 2.3 Providing examples of the types of changes that are within and outside own scope of responsibility 2.4 Communicating ideas for change through small

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
			group discussions and meetings
3. Integrate ideas for change in the workplace	3.1 Critical inquiry method is used to integrate different ideas for change of key people. 3.2 Summarizing, analyzing and generalizing skills are used to extract salient points in the pool of ideas. 3.3 ***Reporting skills*** are likewise used to communicate results. 3.4 ***Current Issues and concerns*** on the systems, processes and procedures, as well as the need for simple innovative practices are identified.	3.1 Roles of individuals in suggesting and making improvements 3.2 Positive impacts and challenges in innovation 3.3 Types of changes and responsibility 3.4 Seven habits of highly effective people 3.5 Basic research skills	3.1 Identifying opportunities to improve and to do things better. Involvement 3.2 Identifying the positive impacts and the challenges of change and innovation 3.3 Providing examples of the types of changes that are within and outside own scope of responsibility 3.4 Communicating ideas for change through small group discussions and meetings 3.5 Demonstrating skills in analysis and interpretation of data

RANGE OF VARIABLES

VARIABLE	RANGE
1. Opportunities for improvement	May include: 1.1 Systems 1.2 Processes 1.3 Procedures 1.4 Protocols 1.5 Codes 1.6 Practices
2. Information	May include: 2.1 Workplace communication problems 2.2 Performance evaluation results 2.3 Team dynamics issues and concerns 2.4 Challenges on return of investment 2.5 New tools, processes and procedures 2.6 New people in the organization
3. People who could provide input	May include: 3.1 Leaders 3.2 Managers 3.3 Specialists 3.4 Associates 3.5 Researchers 3.6 Supervisors 3.7 Staff 3.8 Consultants (external) 3.9 People outside the organization in the same field or similar expertise/industry 3.10 Clients
4. Critical inquiry method	May include: 4.1 Preparation 4.2 Discussion 4.3 Clarification of goals 4.4 Negotiate towards a Win-Win outcome 4.5 Agreement 4.6 Implementation of a course of action 4.7 Effective verbal communication. See our pages: Verbal Communication and Effective Speaking 4.8 Listening 4.9 Reducing misunderstandings is a key part of effective negotiation 4.10 Rapport Building 4.11 Problem Solving 4.12 Decision Making 4.13 Assertiveness 4.14 Dealing with Difficult Situations
5. Reporting skills	May include: 5.1 Data management 5.2 Coding 5.3 Data analysis and interpretation

VARIABLE	RANGE
	5.4 Coherent writing 5.5 Speaking

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Identified opportunities to do things better. 1.2 Discussed and developed ideas with others on how to contribute to workplace innovation. 1.3 Integrated ideas for change in the workplace. 1.4 Analyzed and reported rooms for innovation and learning in the workplace.
2. Resource Implications	**The following resources should be provided:** 2.1 Pens, papers and writing implements 2.2 Cartolina 2.3 Manila papers
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Psychological and behavioral Interviews 3.2 Performance Evaluation 3.3 Life Narrative Inquiry 3.4 Review of portfolios of evidence and third-party workplace reports of on-the-job performance 3.5 Sensitivity analysis 3.6 Organizational analysis 3.7 Standardized assessment of character strengths and virtues applied
4. Context for Assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions.

UNIT OF COMPETENCY : PRESENT RELEVANT INFORMATION

UNIT CODE : 400311215

UNIT DESCRIPTOR : This unit of covers the knowledge, skills and attitudes required to present data/information appropriately.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Gather data/ information	1.1 Evidence, facts and information are collected. 1.2 Evaluation, terms of reference and conditions are reviewed to determine whether data/information falls within project scope.	1.1 Organisational protocols 1.2 Confidentiality 1.3 Accuracy 1.4 Business mathematics and statistics 1.5 Data analysis techniques/procedures 1.6 Reporting requirements to a range of audiences 1.7 Legislation, policy and procedures relating to the conduct of evaluations 1.8 Organisational values, ethics and codes of conduct	1.1 Describing organisational protocols relating to client liaison 1.2 Protecting confidentiality 1.3 Describing accuracy 1.4 Computing business mathematics and statistics 1.5 Describing data analysis techniques/ procedures 1.6 Reporting requirements to a range of audiences 1.7 Stating legislation, policy and procedures relating to the conduct of evaluations 1.8 Stating organisational values, ethics and codes of conduct
2. Assess gathered data/ information	2.1 Validity of data/ information is assessed.	2.1 Business mathematics and statistics	2.1 Computing business mathematics and statistics

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.2 Analysis techniques are applied to assess data/ information. 2.3 Trends and anomalies are identified. 2.4 ***Data analysis techniques*** and procedures are documented. 2.5 Recommendations are made on areas of possible improvement.	2.2 Data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Legislation, policy and procedures relating to the conduct of evaluations 2.5 Organisational values, ethics and codes of conduct	2.2 Describing data analysis techniques/ procedures 2.3 Reporting requirements to a range of audiences 2.4 Stating legislation, policy and procedures relating to the conduct of evaluations 2.5 Stating organisational values, ethics and codes of conduct
3. Record and present information	3.1 Studied data/ information are recorded. 3.2 Recommendations are analysed for action to ensure they are compatible with the project's scope and terms of reference. 3.3 Interim and final reports are analysed and outcomes are compared to the criteria established at the outset. 3.4 Findings are presented to stakeholders.	3.1 Data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Legislation, policy and procedures relating to the conduct of evaluations 3.4 Organisational values, ethics and codes of conduct	3.1 Describing data analysis techniques/ procedures 3.2 Reporting requirements to a range of audiences 3.3 Stating legislation, policy and procedures relating to the conduct of evaluations 3.4 Stating organisational values, ethics and codes of conduct practices

RANGE OF VARIABLES

VARIABLE	RANGE
1. Data analysis techniques	May include: 1.1 Domain analysis 1.2 Content analysis 1.3 Comparison technique

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Determine data / information 1.2 Studied and applied gathered data/information 1.3 Recorded and studied data/information These aspects may be best assessed using a range of scenarios what ifs as a stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.
2. Resource Implications	**Specific resources for assessment** 2.1 Evidence of competent performance should be obtained by observing an individual in an information management role within the workplace or operational or simulated environment.
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Written Test 3.2 Interview 3.3 Portfolio The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.
4. Context for Assessment	4.1 In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

UNIT OF COMPETENCY : **PRACTICE OCCUPATIONAL SAFETY AND HEALTH POLICIES AND PROCEDURES**

UNIT CODE : **400311216**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to identify OSH compliance requirements, prepare OSH requirements for compliance, perform tasks in accordance with relevant OSH policies and procedures.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify OSH compliance requirements	1.1 Relevant ***OSH requirements, regulations, policies and procedures*** are identified in accordance with workplace policies and procedures. 1.2 OSH activity non-conformities are conveyed to ***appropriate personnel***. 1.3 ***OSH preventive and control requirements*** are identified in accordance with OSH work policies and procedures.	1.1 OSH preventive and control requirements 1.2 Hierarchy of Controls 1.3 Hazard Prevention and Control 1.4 General OSH principles 1.5 Work standards and procedures 1.6 Safe handling procedures of tools, equipment and materials 1.7 Standard emergency plan and procedures in the workplace	1.1 Communication skills 1.2 Interpersonal skills 1.3 Critical thinking skills 1.4 Observation skills
2. Prepare OSH requirements for compliance	2.1 OSH work activity material, tools and equipment requirements are identified in accordance with workplace policies and procedures. 2.2 Required OSH materials, tools and equipment are acquired in accordance with workplace policies and procedures.	2.1 Resources necessary to execute hierarchy of controls 2.2 General OSH principles 2.3 Work standards and procedures 2.4 Safe handling procedures of tools, equipment and materials 2.5 Different OSH control measures	2.1 Communication skills 2.2 Estimation skills 2.3 Interpersonal skills 2.4 Critical thinking skills 2.5 Observation skills 2.6 Material, tool and equipment identification skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.3 Required OSH materials, tools and equipment are arranged/ placed in accordance with OSH work standards.		
3. Perform tasks in accordance with relevant OSH policies and procedures	3.1 Relevant OSH work procedures are identified in accordance with workplace policies and procedures. 3.2 Work Activities are executed in accordance with OSH work standards. 3.3 ***Non-compliance work activities*** are reported to *appropriate personnel*.	3.1 OSH work standards 3.2 Industry related work activities 3.3 General OSH principles 3.4 OSH Violations Non-compliance work activities	3.1 Communication skills 3.2 Interpersonal skills 3.3 Troubleshooting skills 3.4 Critical thinking skills 3.5 Observation skills

RANGE OF VARIABLES

VARIABLE	RANGE
1. OSH Requirements, Regulations, Policies and Procedures	May include: 1.1 Clean Air Act 1.2 Building code 1.3 National Electrical and Fire Safety Codes 1.4 Waste management statutes and rules 1.5 Permit to Operate 1.6 Philippine Occupational Safety and Health Standards 1.7 Department Order No. 13 (Construction Safety and Health) 1.8 ECC regulations
2. Appropriate Personnel	May include: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself
3. OSH Preventive and Control Requirements	May include: 3.1 Resources needed for removing hazard effectively 3.2 Resources needed for substitution or replacement 3.3 Resources needed to establishing engineering controls 3.4 Resources needed for enforcing administrative controls 3.5 Personal Protective equipment
4. Non OSH-Compliance Work Activities	May include non-compliance or observance of the following safety measures: 4.1 Violations that may lead to serious physical harm or death 4.2 Fall Protection 4.3 Hazard Communication 4.4 Respiratory Protection 4.5 Power Industrial Trucks 4.6 Lockout/Tag-out 4.7 Working at heights (use of ladder, scaffolding) 4.8 Electrical Wiring Methods 4.9 Machine Guarding 4.10 Electrical General Requirements 4.11 Asbestos work requirements 4.12 Excavations work requirements

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Convey OSH work non-conformities to appropriate personnel 1.2 Identify OSH preventive and control requirements in accordance with OSH work policies and procedures 1.3 Identify OSH work activity material, tools and equipment requirements in accordance with workplace policies and procedures 1.4 Arrange/Place required OSH materials, tools and equipment in accordance with OSH work standards 1.5 Execute work activities in accordance with OSH work standards 1.6 Report OSH activity non-compliance work activities to appropriate personnel
2. Resource Implications	**The following resources should be provided:** 2.1 Facilities, materials tools and equipment necessary for the activity
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Observation/Demonstration with oral questioning 3.2 Third party report
4. Context for Assessment	4.1 Competency may be assessed in the work place or in a simulated work place setting

UNIT OF COMPETENCY : **EXERCISE EFFICIENT AND EFFECTIVE SUSTAINABLE PRACTICES IN THE WORKPLACE**

UNIT CODE : **400311217**

UNIT DESCRIPTOR : This unit covers knowledge, skills and attitude to identify the efficiency and effectiveness of resource utilization, determine causes of inefficiency and/or ineffectiveness of resource utilization and Convey inefficient and ineffective environmental practices.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify the efficiency and effectiveness of resource utilization	1.1 Required resource utilization in the workplace is measured using appropriate techniques. 1.2 Data are recorded in accordance with workplace protocol. 1.3 Recorded data are compared to determine the efficiency and effectiveness of resource utilization according to established ***environmental work procedures***.	1.1 Importance of Environmental Literacy 1.2 Environmental Work Procedures 1.3 Waste Minimization 1.4 Efficient Energy Consumptions	1.1 Recording Skills 1.2 Writing Skills 1.3 Innovation Skills
2. Determine causes of inefficiency and/or ineffectiveness of resource utilization	2.1 Potential causes of inefficiency and/or ineffectiveness are listed. 2.2 Causes of inefficiency and/or ineffectiveness are identified through deductive reasoning. 2.3 Identified causes of inefficiency and/or ineffectiveness are validated thru established	2.1 Causes of environmental inefficiencies and ineffective-ness	2.1 Deductive Reasoning Skills 2.2 Critical thinking 2.3 Problem Solving 2.4 Observation Skills

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	environmental procedures.		
3. Convey inefficient and ineffective environmental practices	3.1 Efficiency and effectiveness of resource utilization are reported to *appropriate personnel*. 3.2 Concerns related resource utilization are discussed with appropriate personnel. 3.3 Feedback on information/ concerns raised are clarified with appropriate personnel.	3.1 Appropriate Personnel to address the environmental hazards 3.2 Environmental corrective actions	3.1 Written and Oral Communication Skills 3.2 Critical thinking 3.3 Problem Solving 3.4 Observation Skills 3.5 Practice Environmental Awareness

RANGE OF VARIABLES

VARIABLE	RANGE
1. Environmental Work Procedures	May include: 1.1 Utilization of Energy, Water, Fuel Procedures 1.2 Waster Segregation Procedures 1.3 Waste Disposal and Reuse Procedures 1.4 Waste Collection Procedures 1.5 Usage of Hazardous Materials Procedures 1.6 Chemical Application Procedures 1.7 Labeling Procedures
2. Appropriate Personnel	May include: 2.1 Manager 2.2 Safety Officer 2.3 EHS Offices 2.4 Supervisors 2.5 Team Leaders 2.6 Administrators 2.7 Stakeholders 2.8 Government Official 2.9 Key Personnel 2.10 Specialists 2.11 Himself

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Measured required resource utilization in the workplace using appropriate techniques 1.2 Recorded data in accordance with workplace protocol 1.3 Identified causes of inefficiency and/or ineffectiveness through deductive reasoning 1.4 Validate the identified causes of inefficiency and/or ineffectiveness thru established environmental procedures 1.5 Report efficiency and effectives of resource utilization to appropriate personnel 1.6 Clarify feedback on information/concerns raised with appropriate personnel
2. Resource Implications	**The following resources should be provided:** 2.1 Workplace 2.2 Tools, materials and equipment relevant to the tasks 2.3 PPE 2.4 Manuals and references
3. Methods of Assessment	**Competency in this unit may be assessed through:** 3.1 Demonstration 3.2 Oral questioning 3.3 Written examination
4. Context for Assessment	4.1 Competency assessment may occur in workplace or any appropriately simulated environment 4.2 Assessment shall be observed while task are being undertaken whether individually or in-group

UNIT OF COMPETENCY : PRACTICE ENTREPRENEURIAL SKILLS IN THE WORKPLACE

UNIT CODE : 400311218

UNIT DESCRIPTOR : This unit covers the outcomes required to apply entrepreneurial workplace best practices and implement cost-effective operations.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Apply entrepreneurial workplace best practices	1.1 ***Good practices*** relating to workplace operations are observed and selected following workplace policy. 1.2 Quality procedures and practices are complied with according to workplace requirements. 1.3 Cost-conscious habits in ***resource utilization*** are applied based on industry standards.	1.1 Workplace best practices, policies and criteria 1.2 Resource utilization 1.3 Ways in fostering entrepreneurial attitudes: • Patience • Honesty • Quality-consciousness • Safety-consciousness • Resourceful-ness	1.1 Communication skills 1.2 Complying with quality procedures
2. Communicate entrepreneurial workplace best practices	2.1 Observed good practices relating to workplace operations are communicated to **appropriate person**. 2.2 Observed quality procedures and practices are communicated to appropriate person.	2.1 Workplace best practices, policies and criteria 2.2 Resource utilization 2.3 Ways in fostering entrepreneurial attitudes: • Patience • Honesty • Quality-consciousness	2.1 Communication skills 2.2 Complying with quality procedures 2.3 Following workplace communication protocol

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.3 Cost-conscious habits in resource utilization are communicated based on industry standards.	• Safety-consciousness • Resourceful-ness	
3. Implement cost-effective operations	3.1 Preservation and optimization of workplace resources is implemented in accordance with enterprise policy. 3.2 Judicious use of workplace tools, equipment and materials are observed according to manual and work requirements. 3.3 Constructive contributions to office operations are made according to enterprise requirements. 3.4 Ability to work within one's allotted time and finances is sustained.	3.1 Optimization of workplace resources 3.2 5S procedures and concepts 3.3 Criteria for cost-effectiveness 3.4 Workplace productivity 3.5 Impact of entrepreneurial mindset to workplace productivity 3.6 Ways in fostering entrepreneurial attitudes: • Quality-consciousness • Safety-consciousness	3.1 Implementing preservation and optimizing workplace resources 3.2 Observing judicious use of workplace tools, equipment and materials 3.3 Making constructive contributions to office operations 3.4 Sustaining ability to work within allotted time and finances

RANGE OF VARIABLES

VARIABLE	RANGE
1. Good practices	May include: 1.1 Economy in use of resources 1.2 Documentation of quality practices
2. Resources utilization	May include: 2.1 Consumption/ use of consumables 2.2 Use/Maintenance of assigned equipment and furniture 2.3 Optimum use of allotted /available time

EVIDENCE GUIDE

1. Critical aspects of Competency	**Assessment requires evidence that the candidate:** 1.1 Demonstrated ability to identify and sustain cost-effective activities in the workplace 1.2 Demonstrated ability to practice entrepreneurial knowledge, skills and attitudes in the workplace.
2. Resource Implications	**The following resources should be provided:** 2.1 Simulated or actual workplace 2.2 Tools, materials and supplies needed to demonstrate the required tasks 2.3 References and manuals 2.3.1 Enterprise procedures manuals 2.3.2 Company quality policy
3. Methods of Assessment	**Competency in this unit should be assessed through:** 3.1 Interview 3.2 Third-party report
4. Context for Assessment	4.1 Competency may be assessed in workplace or in a simulated workplace setting 4.2 Assessment shall be observed while tasks are being undertaken whether individually or in-group

COMMON COMPETENCIES

UNIT OF COMPETENCY : VALIDATE VEHICLE SPECIFICATION

UNIT CODE : ALT723211

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude to check body type of the vehicle, check vehicle engine type, check vehicle specifications and complete validation of vehicle specification.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Check body type of the vehicle	1.1 ***Kind of vehicle*** is determined according to job order. 1.2 ***Vehicle dimensions*** is determined according to manual. 1.3 ***Vehicle weight*** is determined according to the manual. 1.4 ***Body shape*** is determined according to the manual. 1.6 ***Power train*** is determined according to the manual. 1.7 Safety practices are applied following OSHS.	1.1 Kind of vehicle 1.1.1 Aerodyna-mics 1.1.2 Vehicle Dynamics 1.1.3 Body shapes 1.1.4 Power train 1.1.5 Major dimensions 1.2 Vehicle specifications 1.2.1 Vehicle performance 1.2.2 Weight & Measureme nts 1.3 Automotive history 1.4 Documentation/ Accomplishing checklist 1.5 Resources information 1.5.1 Bulletin 1.5.2 Shop manual 1.6 OSHS 1.7 PPEs 1.8 Attitude: 1.8.1 Patience 1.8.2 Attention to details	1.1 Identifying kind of vehicle, dimensions, weight, body shape, and power train 1.2 Accomplishing checklist 1.3 Estimating visually dimensions and masses 1.4 Utilizing resource information 1.5 Wearing PPEs 1.6 Applying safety practices
2. Check vehicle engine type	2.1 ***Engine type*** is identified according	2.1 Principles of internal combustions	2.1 Identifying engine type,

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	to industry standards. 2.2 Engine ***fuel/energy system*** is identified according to manual. 2.3 ***Engine components*** are identified following manual.	2.2 Principles of Electricity and motors 2.3 History of engines 2.4 Hybrid technology 2.5 Resources information 2.5.1 Bulletin 2.5.2 Shop manual	parts & components 2.2 Identifying fuel systems or energy systems 2.3 Utilizing resource information
3. Check vehicle specifications	3.1 VIN plate is inspected for specification of vehicle according to manual. 3.2 Vehicle specification is verified according to ***vehicle reference materials***. 3.3 Vehicle modifications and conversions are checked following the manual. 3.3 Vehicle conversions are inspected following the manual.	3.1 Fundamentals of Automotive engineering: 3.1.1 Understanding of power & torque 3.1.2 Gear Ratios 3.1.3 Vehicle Regulations 3.1.4 Knowledge of vehicle performance 3.1.5 Knowledge in Vehicle manufacturing process 3.1.6 Knowledge of vehicle use 3.1.7 Automotive history 3.2 Knowledge in specifications 3.3 Reading of brochure, owner's manuals 3.4 Reading of Resources information 3.4.1 Bulletin 3.4.2 Shop manual	3.1 Reading vehicle reference materials 3.2 Conducting vehicle inspection for modification and conversion 3.3 Comparing actual vehicle and specification sheets 3.4 Utilizing resource information
4. Complete validation of vehicle specification	4.1 Vehicle ownership is verified using repair order and vehicle reference materials.	4.1 Reporting to immediate superior 4.2 Documentation/ Accomplishing checklist	4.1 Verifying vehicle ownership 4.2 Accomplishing dealers check sheet 4.3 Reporting skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	4.2 ***Dealers check sheet*** is accomplished following industry standards. 4.3 ***Dealers check sheet*** is submitted to immediate superior following industry standards.	4.3 Attitude: 4.3.1 Accuracy	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Kind of Vehicle	May include: 1.1 Motorized 1.2 Not Motorized 1.3 On-Road 1.4 Off-Road 1.5 Passenger 1.6 Commercial 1.7 Utility 1.8 Manned 1.9 Unmanned 1.10 Remote control 1.11 Automated/Self Driving 1.12 Guided
2. Vehicle Dimensions	May include: 2.1 Overall length 2.2 Overall width 2.3 Overall height 2.4 Wheelbase 2.5 Tread 2.6 Minimum running ground clearance 2.7 Room Length 2.8 Room Width 2.9 Room Height 2.10 Overhang front 2.11 Overhang rear 2.12 Angle of approach 2.13 Angle of departure
3. Vehicle Weight	May include: 3.1 Gross weight 3.2 Curb weight 3.3 Tare weight 3.4 Net weight
4. Body Shape	May include: 4.1 Sedan 4.2 Coupe 4.3 Hardtop 4.4 Convertible 4.5 Multipurpose vehicle (MPV) 4.6 Sports utility vehicle (SUV) 4.7 Truck 4.8 Tractor Head 4.9 Trailer 4.10 Special Utility Truck 4.11 Bus 4.12 Mini Bus 4.13 Articulated bus 4.14 Asian Utility Vehicle (AUV)

VARIABLE	RANGE
5. Power Train	May include: 5.1 Front Wheel Drive 5.2 Rear Wheel Drive 5.3 4x2 5.4 4x4 5.5 Limited Slip Differential (LSD) 5.6 Manual Transmission 5.7 Automatic Transmission 5.8 Continuously Variable Transmission
6. Engine Type	May include: 6.1 Internal Combustion Engine 6.2 Electric Motor
7. Fuel/Energy System	May include: 7.1 Diesel Fuel 7.2 Gasoline Fuel 7.3 Compressed Natural Gas (CNG) 7.4 Liquefied Petroleum Gas (LPG) 7.5 Methanol 7.6 Hydrogen 7.7 Biodiesel 7.8 Solar Cell 7.9 Fuel Cell
8. Engine Components	May include: 8.1 Intake System 8.2 Electrical System 8.3 Cooling System 8.4 Exhaust System 8.5 Valve Train System 8.6 Cylinder Head 8.7 Engine Block 8.8 Lubricating System
9. Vehicle reference materials	May include: 9.1 Warranty booklet 9.2 Brochure of the vehicle 9.3 Vehicle registration
10. Dealers check sheet	May include: 10.1 Vehicle mileage 10.2 Owner's information 10.3 Damage

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Checked body type of the vehicle 1.2 Checked vehicle engine type 1.3 Checked vehicle specifications 1.4 Completed validation of vehicle specification
2. Resource Implications	The following resources should be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate vehicle or model equivalent 2.3 Materials relevant to the activity 2.4 Resource information, references, and manual
3. Method of Assessment	Competency in this unit may be assessed through: 3.1 Direct Observation 3.2 Interview 3.3 Third Party Report 3.4 Written exam 3.5 Demonstration with Oral questioning
4. Context of Assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : MOVE AND POSITION VEHICLE

UNIT CODE : ALT723212

UNIT DESCRIPTOR : This unit involves the skills and knowledge and attitudes required to move and position vehicle safely including systematic and efficient control of all vehicle functions.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare vehicle for operation	1.1 Vehicle ***multi point inspection*** is conducted according to industry practice. 1.2 ***Cockpit Drill*** is performed according to industry practice. 1.3 Vehicle is start-up following owner's manual. 1.4 Parking brake is engaged according to industry practice.	1.1 Revolutions per minute during idle 1.2 Manual, automatic and CVT Transmission 1.3 Vehicle parts, components and functions 1.4 Inspection procedures 1.5 Owner's manual 1.6 Safety procedures	1.1 Performing Cockpit Drill 1.2 Conducting Vehicle Multi point inspection 1.3 Starting the engine 1.4 Using owner's manual
2. Position vehicle	2.1 ***Workshop hazards*** are identified and avoided as per standard operating procedures. 2.2 Vehicle is moved according to Occupational Health and Safety Standards. 2.3 Workshop rules and regulations are recognized according to standard procedures.	2.1 Revolutions per minute in running condition 2.2 Kilometer per hour 2.3 Estimation/ timing 2.4 Manual, automatic and CVT Transmission 2.5 Diesel, Gasoline and EV engines 2.6 Vehicle parts, components and functions 2.7 Defensive driving 2.8 Owner's Manual 2.9 Safety procedures	2.1 Skills in positioning vehicle 2.2 Vehicle positioning estimation skill 2.3 Identifying workshop signs and markings
3. Park and stop the vehicle	3.1 Vehicle is positioned according to ***parking rules and regulations***.	3.1 Vehicle parts, components and functions 3.2 Inspection procedures	31 Vehicle positioning estimation skills

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.2 Parking brake is engaged according to industry practice. 3.3 ***Electrical devices*** are turned off based on manufacturer's specification. 3.4 Vehicle is shut-off following owner's manual.	3.3 Owner's Manual 3.4 Procedure in shutting-off vehicle 3.5 Safety procedures 3.6 Parking rules and regulations	3.2 Identifying parking signs and markings

RANGE OF VARIABLES

VARIABLE	RANGE
1. Multi point inspection	May include: 1.1 Check for any obstruction 1.2 Check external condition 1.3 Check internal condition 1.3.1 Manual transmission 1.3.2 Automatic transmission 1.4 Check vehicle drivability
2. Cockpit Drill	May include: 2.1 Car mirror adjustments 2.2 Steering the car 2.3 How to change gears 2.4 Use of parking brake 2.5 Doors, Seat, Steering, Seat belt and Mirrors 2.6 Foot controls 2.7 Hand controls 2.8 Auxiliary controls (indicators)
3. Workshop hazards	May include: 3.1 Workshop tools and materials 3.2 Workshop equipment 3.3 Other vehicles 3.4 Other people 3.5 Oil spills 3.6 Loose parts
4. Parking rules and regulation	May include: 4.1 Parallel parking 4.2 Horizontal parking 4.3 Park facing the wall
5. Electrical devices	May include: 5.1 Lights 5.2 Air conditioning 5.3 Wiper 5.4 Radio

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Prepared vehicle for operation 1.2 Positioned the vehicle 1.3 Parked and stopped the vehicle 1.4 Used owner's manual
2. Resource implication	The following resources MUST be provided: 2.1 Workshop range/area 2.2 Service working bay 2.3 Appropriate vehicle for moving and positioning 2.4 Owner's manual
3. Method of assessment	Competency MUST be assessed through: 3.1 Demonstration with oral questioning 3.2 Written exam 3.3 Interview 3.4 Direct observation
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : UTILIZE AUTOMOTIVE TOOLS

UNIT CODE : ALT723214

UNIT DESCRIPTOR : This unit covers the knowledge and skills in selecting and using automotive power tools, hand tools and tool keeping.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare automotive tools	1.1 ***Automotive tools*** are identified according to their classification and specification. 1.2 ***Automotive tools and attachments*** are selected according to job requirements. 1.3 ***Automotive tools and attachments*** are inspected for ***defects and damages*** according to manufacturers and work place procedures. 1.4 Safety practices are applied following OSHS.	1.1 Understanding power to size ratio 1.2 Leverage 1.3 Types of power tools and hand tools 1.4 Uses of automotive power tools and hand tools 1.5 Defects and damages of automotive tools and attachments 1.6 Handling of tools 1.7 Interpretation of contents of users manuals 1.8 Safety procedures 1.9 Wearing of PPE	1.1 Identifying defects or damages of tools before use 1.2 Knowledgeable in proper handling of tools 1.3 Identifying tools required for the job 1.4 Inspecting the area were power tools will be use
2. Use automotive tools	2.1 ***Attachments*** are mounted to ***automotive tools*** according to job requirements. 2.2 Power tools are connected to ***power sources*** according to operation's manual. 2.3 Power tools are operated according to operation's manual. 2.4 ***Hand tools*** are utilized according to operation's manual.	2.1 Use of automotive tools 2.2 Application of Torque and pressure 2.3 Unit conversion of torque 2.4 English and metric system 2.5 Types of hand tools 2.6 Types of power tools 2.7 Fundamentals of automotive hand tools and power tools	2.1 Analytical skills 2.2 Technical literacy 2.3 Mounting attachments to automotive tools 2.4 Connecting power tools to power sources 2.5 Operating power tools 2.6 Utilizing hand tools 2.7 Wearing PPEs 2.8 Applying safety practices

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.5 ***PPEs*** are worn in accordance to OSHS.	2.8 Interpretation of contents of users manuals 2.9 OSHS 2.10 Resources information 2.10.1 Bulletin 2.10.2 Shop manual	2.9 Following manuals
3. Maintain automotive tools	3.1 ***Automotive tools and attachments*** are cleaned according to user's manual. 3.2 ***Automotive tools and attachments*** are checked for serviceability according to workplace and manufacturers procedures. 3.3 ***Defects and damages*** are reported to immediate superior following industry standards. 3.4 ***Automotive tools and attachments*** are stored according to workplace procedures. 3.5 Safety practices are applied following OSHS. 3.6 ***Wastes*** are disposed following environmental law and regulations.	3.1 Different types of power tools and hand tools 3.2 Techniques in tool Arrangement 3.3 Fundamentals of automotive tools 3.4 Cleaning of automotive tools 3.5 Labeling and arranging of power tools and hand tools 3.6 Safety practices 3.7 Procedures in maintaining of power tools and hand tools 3.8 Tagging of damaged/ worn power tools and hand tools 3.9 Reporting damage power tools and hand tools 3.10 Proper disposal of damaged tools 3.11 Proper disposal of chemicals used for cleaning 3.12 OSHS 3.13 Environmental law and regulations 3.14 5S of good housekeeping 3.15 3Rs	3.1 Sorting of tools 3.2 Skills in creating reports 3.3 Cleaning of tools 3.4 Checking, cleaning and storing automotive tools and attachments 3.5 Reporting defects and damages 3.6 Disposing wastes 3.7 Practicing safety procedures

RANGE OF VARIABLES

VARIABLE	RANGE
1. Automotive tools	May include: 1.1 Power tools 1.1.1 Electric power tools 1.1.1.1 Electric drill 1.1.2 Pneumatic tools 1.2 Basic tools 1.3 Special service tools (SST)
2. Power sources	May include: 2.1 Electric source 2.2 Pneumatic or air 2.3 Hydraulic
3. Basic tools	May include: 3.1 Wrenches 3.2 Pliers 3.3 Screw drivers 3.4 Power handle 3.5 Ratchet 3.6 Multitester 3.7 Flash light 3.8 Rubber mallet 3.9 Hammer 3.10 Jack 3.11 Jack stand 3.12 Choke
4. Attachments	May include: 4.1 Bits 4.2 Sockets 4.3 Extension
5. Defects and damages	May include: 5.1 Tools 5.1.1 Cracks 5.1.2 Breakage 5.1.3 Deformity 5.1.4 Looseness 5.1.5 Corrosions 5.1.6 Leaks 5.2 Attachments 5.2.1 Cracks 5.2.2 Breakage 5.2.3 Deformity 5.2.4 Looseness 5.2.5 Corrosions
6. Personal protective equipment (PPEs)	May include: 6.1 Goggles 6.2 Gloves 6.3 Hard hat

VARIABLE	RANGE
	6.4 Safety shoes 6.5 Dust mask
7. Wastes	May include: 7.1 Dead batteries 7.2 Deformed, cracked, broken bits/sockets/extensions 7.3 Used cleaning chemicals 7.4 Used oil 7.5 Contaminated cleaning materials

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment require evidence that the candidate understands the applications and guidelines specified by the manufacturer. 1.1 Prepared automotive tools 1.2 Used Power tools 1.3 Used Hand tools 1.4 Maintained and stored automotive tools 1.5 Disposed wastes 1.6 Applied safety measures
2. Resource implication	The following resource MUST be provided: 2.1 Appropriate power tools and hand tools 2.2 Tools and materials relevant for training 2.3 Proper place for storage and disposal 2.4 Work shop manuals
3. Method of assessment	Competency MUST be assessed through: 3.1 Written examination 3.2 Demonstrations with oral questioning 3.3 Direct observation 3.4 Third party report 3.5 Interview
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution

UNIT OF COMPETENCY : PERFORM MENSURATION AND CALCULATION

UNIT CODE : ALT723215

UNIT DESCRIPTOR : This unit covers the knowledge and skills on how to use automotive measuring tools.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Select measuring instruments	1.1 Component to be measured is identified based on job requirements. 1.2 ***Automotive measuring instrument*** is identified based on job requirements. 1.3 Correct specifications are obtained from repair manual. 1.4 Measuring tools are calibrated in line with job requirements. 1.5 Measuring instruments are checked for accuracy and adjusted according to manufacturer's manual. 1.6 Defective measuring instruments are reported and returned to toolkeeper following industry standards. 1.7 Safety practices are applied following OSHS.	1.1 Category of measuring instruments 1.2 Types and uses of measuring instruments 1.3 Shapes and Dimensions 1.4 Use of user's manual 1.5 Workshop procedures in reporting defective instruments 1.6 Characteristics of defective measuring instruments 1.7 Procedure in preparing report 1.8 OSHS in calibrating measuring instruments 1.9 Calibration of measuring tools 1.10 Inspection of measuring tools 1.11 Segregation and reporting of defective measuring instruments	1.1 Identifying and selecting measuring instruments 1.2 Visualizing objects and shapes 1.3 Calibration skills 1.4 Identifying defective measuring instruments 1.5 Reporting skills 1.6 Applying safety practices 1.7 Obtaining correct specifications 1.8 Checking measuring instruments for accuracy 1.9 Reporting and segregating defective measuring instruments
2. Carry out measurements and calculation	2.1 ***Automotive measuring instrument*** is selected to achieve required outcome in	2.1 Formulas for volume, areas, perimeters of plane and geometric figures	2.1 Performing calculation 2.2 Applying formulas for volume, areas, perimeters of

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	line with job requirements. 2.2 Accurate measurements are obtained in line with job requirements. 2.3 ***Calculation*** needed to complete work tasks are performed using ***mathematical operations***. 2.4 Numerical computation is self-checked and corrected for accuracy following manufacturer's workshop manual. 2.3 Tools' limit of accuracy are read following manufacturer's workshop manual. 2.4 Report is submitted to immediate supervisor following industry standard operating procedure. 2.5 Safety practices are applied following OSHS.	2.2 Different automotive measuring instruments 2.3 Calculation & measurement 2.4 Four fundamental operation 2.5 Linear measurement 2.6 Dimensions 2.7 Unit conversion 2.8 Ratio and proportion 2.9 Handling of measuring instruments 2.10 Tools' limit of accuracy 2.11 OSHS 2.12 PPEs	plane and geometric figures 2.3 Handling measuring instruments 2.4 Selecting automotive measuring instruments 2.5 Obtaining accurate measurements 2.6 Performing calculation 2.7 Self-checking and correcting numerical computation 2.8 Reading tools' limit of accuracy 2.9 Applying OSHS 2.10 Wearing of PPEs
3. Maintain measuring instruments	3.1 Measuring instruments are handled following manufacturer's manual. 3.2 Measuring instruments are cleaned following manufacturer's manual. 3.3 Instruments are stored according to manufacturer's specifications and standard operating procedures.	3.1 Types of measuring instruments and their uses 3.2 Safe handling procedures in using measuring instruments 3.3 Four fundamental operation of mathematics 3.4 Formula for volume, area, perimeter and other geometric figures	3.1 Handling and maintaining measuring instruments 3.2 Disposing wastes 3.3 Practicing good housekeeping 3.4 Applying safety practices

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	3.4 Safety practices are applied.	3.5 5S of good housekeeping 3.6 Waste management 3.7 Storing of measuring instruments 3.8 OSHS	

RANGE OF VARIABLES

VARIABLE	RANGE
1. Automotive measuring instruments	May include: 1.1 Torque wrench 1.2 Vernier caliper 1.3 Micrometer (inside and outside) 1.4 Dial gauge 1.5 Feeler gauge 1.7 Pitch/thread gauge 1.8 Multi-tester (analog/digital) 1.9 Vacuum Gauge 1.10 Tire depth gauge 1.11 Battery tester 1.12 Steel tape 1.13 Ruler
2. Calculation	May include: 2.1 Volume 2.2 Area 2.3 Displacement 2.4 Inside diameter 2.5 Circumference 2.6 Length 2.7 Thickness 2.8 Outside diameter 2.9 Taper 2.10 Out of roundness 2.11 Voltage 2.12 Resistance 2.13 Current 2.14 Pressure 2.15 Clearance 2.16 Distortion/run-out 2.17 Torque conversion 2.18 Temperature
3. Mathematical operations	Includes: 3.1 Addition 3.2 Subtraction 3.3 Multiplication 3.4 Division 3.5 Fractions 3.6 Percentages 3.7 Mixed numbers

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate perform the following: 1.1 Selected measuring instruments 1.2 Performed measurements and calculation 1.3 Maintained measuring instruments 1.4 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Automotive Measuring Tools & equipment 2.3 Materials relevant to the activity 2.4 Training vehicle or simulators 2.5 User's manual 2.6 Repair manual
3. Method of assessment	Competency MUST be assessed through: 3.1 Written exam 3.2 Demonstration with oral questioning 3.3 Third party report 3.4 Interview
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : **UTILIZE WORKSHOP FACILITIES AND EQUIPMENT**

UNIT CODE : **ALT723216**

UNIT DESCRIPTOR : This unit deals with inspecting and cleaning of work area including tools, equipment and facilities. Storage of equipment, including operating of basic workshop equipment.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Perform pre-operation activities	1.1 ***Workshop facilities*** are prepared according to work requirements. 1.2 ***Equipment*** are prepared according to work requirements. 1.3 ***Equipment*** are calibrated following users' manual. 1.4 ***Minor repairs*** are carried out based on users' ***manual***. 1.5 Defective equipment are reported to immediate supervisor following company procedures. 1.6 Safety practices are applied following OSHS.	1.1 Different areas of an automotive service facilities 1.2 Preparation procedures of automotive service facilities 1.3 Different equipment in the automotive service facilities 1.4 Preparation procedures of automotive equipment 1.5 Minor repairs of automotive equipment 1.6 Report of defective equipment 1.7 Reporting procedures for defective equipment 1.8 OSHS practices related to the preparation of facilities and equipment 1.9 Workshop facilities and equipment	1.1 Preparing work area 1.2 Preparing equipment 1.3 Calibrating equipment 1.4 Repairing minor equipment issues 1.5 Reporting defective equipment 1.6 Applying safety practice 1.7 Following manuals

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
2. Use facilities and equipment	2.1 Equipment is operated according to operation ***manual***. 2.2 Facilities are utilized according to workshop procedures. 2.3 Equipment performance is monitored following users' ***manual***. 2.4 Facilities functionalities are monitored following workplace procedures. 2.5 Safety practices are applied following OSHS.	2.1 Operate Equipment 2.2 Identify facilities required for task 2.3 Evaluate equipment operation 2.4 Inspect facility functionalities 2.5 OSHS practices related to operation of facilities and equipment 2.6 Manuals in utilizing facility and equipment 2.7 Monitoring procedure of equipment's performance 2.8 Evaluate equipment operation 2.9 Inspection of facility functionalities	2.1 Operating equipment 2.2 Utilizing facility 2.3 Monitoring equipment performance 2.4 Monitoring functionalities of facility 2.5 Practicing safety 2.6 Following manual
3. Conduct post-operation activities	3.1 Workshop facilities are restored according to 5S of good housekeeping. 3.2 ***Equipment*** are cleaned and stored according to good housekeeping. 3.3 Wastes are disposed following waste management procedure and OSHS. 3.4 ***PPEs*** and Safety practices are applied following OSHS. 3.5 Report is prepared based on workshop procedure.	3.1 5S of Good housekeeping 3.2 3Rs/ Waste segregation and disposal 3.3 Restoration of the facilities 3.4 Maintenance and storage of Equipment 3.5 OSHS 3.6 Preparation of report	3.1 Restoring workshop facilities properly 3.2 Cleaning Equipment 3.3 Storing equipment in proper location 3.4 Disposing waste materials 3.5 Reporting facilities and equipment condition 3.6 Practicing safety 3.7 Practicing 5S and 3Rs

RANGE OF VARIABLES

VARIABLE	RANGE
1. Equipment	May include: 1.1 Lifter (Two Post Lifter / Four Post Lifter/ Scissor type) 1.2 Crocodile Jack 1.3 Jack Stand 1.4 Air Compressor 1.5 Oil drain
2. Workshop facilities	May include: 2.1 Service Stall / Working Bay / Workshop areas for servicing/repairing light and/or heavy vehicle and/or plant transmissions and/or outdoor power equipment 2.2 Overhauling Room 2.3 Electrical / Air-con Room 2.4 Inspection Area 2.5 Open workshop/garage and enclosed, ventilated office area 2.6 Car wash area 2.7 Other variables may include workshop with: 2.7.1 Mess hall 2.7.2 Wash room 2.7.3 Comfort room 2.7.4 Storage Room 2.7.5 Training Room
3. Manuals	May include: 3.1 Vehicle/plant manufacturer specifications 3.2 Company operating procedures 3.3 Industry/Workplace Codes of Practice 3.4 Product manufacturer specifications 3.5 Industry Occupational Health &Safety 3.6 Equipment Operation Guidelines 3.7 Service/workshop/repair manual
4. PPEs	May include: 4.1 Gloves 4.2 Apron 4.3 Goggles 4.4 Safety shoes 4.5 Uniforms 4.6 Cap 4.7 Safety helmet
5. Minor repairs	May include: 5.1 Lubrication 5.2 Bolt tightening 5.3 Worn-out parts replacement

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Performed pre-operation activities 1.2 Used facilities and equipment 1.3 Conducted post-operation activities 1.4 Applied safety practices and good housekeeping 1.5 Disposed wastes
2. Resource implications	The following resources should be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Equipment 2.3 Materials relevant to the activity 2.4 Manuals/references 2.5 PPEs 2.6 Fire Extinguishers
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Written exam 3.2 Demonstration with oral questioning 3.3 Direct observation
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : **PREPARE SERVICING PARTS AND CONSUMABLES**

UNIT CODE : **ALT723217**

UNIT DESCRIPTOR : This unit of competency covers the ability to prepare parts and consumables for gasoline and diesel engines in conducting preventive maintenance.

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Identify parts and consumables	1.1 ***Parts and consumables*** are ***determined*** according to job requirements. 1.2 Availability of parts and consumables are confirmed based on stock. 1.3 ***Indirect materials*** are identified according to job requirements. 1.4 ***Hazardous parts and consumables*** are identified according International standards. 1.5 Safety practices are applied according to OSHS.	1.1 Job requirements 1.2 Safety practices 1.3 Understanding manuals 1.4 Hazardous parts and consumables 1.5 Solid waste management act (RA 6969) 1.6 Wearing of PPE's 1.7 OSHS 1.8 Proper storage of materials 1.9 Chemical contents of consumables 1.10 Composition of consumables 1.11 Quality of parts and consumables 1.12 Computation for quantity of parts and consumables 1.13 Vehicle specifications 1.14 Identifying Part no. 1.15 Awareness in part number 1.16 Updated type of parts and consumables	1.1 Determining parts and consumables 1.2 Reading and interpreting job requirements 1.3 Identifying required parts & consumables 1.4 Understanding safety practices 1.5 Determining quantity and quality of parts and consumables 1.6 Confirming availability of parts and consumables 1.7 Identifying indirect materials 1.8 Identifying hazardous parts and consumables 1.9 Applying safety practices 1.10 Understanding safety practices 1.11 Following manuals
2. Retrieve and withdraw parts and consumables	2.1 Requisition slip is prepared according to identified parts and consumables.	2.1 Job requirements 2.2 Safety practices 2.3 Understanding manuals	2.1 Reading and interpreting requisition slip

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.2 Withdrawal of parts and materials are recorded. 2.3 Quantity of parts and consumables are validated according to job requirements. 2.4 Parts and materials are handled following safety procedures.	2.4 Hazardous parts and consumables 2.5 Solid waste management act (RA 6969) 2.6 Wearing of PPE's 2.7 Updated types of parts & consumables for proper usage	2.2 Validating quantity of parts and materials 2.3 Handling parts and consumables
3. Complete work process	3.1 Used parts and consumables are labeled and segregated. 3.2 Used parts are packed and returned to customers. 3.3 Consumables are collected for recycling. 3.4 PPEs are worn following OSHS. 3.5 ***Wastes*** are disposed according to RA 6969.	3.1 Labeling and segregation of used parts and consumables 3.2 Job requirements 3.3 Safety practices 3.4 3Rs 3.5 Solid waste management act (RA 6969) 3.6 Wearing of PPE's	3.1 Waste segregation and disposal of parts & consumables according to RA 6969

RANGE OF VARIABLES

VARIABLE	RANGE
1. Parts and consumables	May include: 1.1 Engine oil 1.2 Clutch fluid 1.3 Transmission oil 1.4 Differential oil 1.5 Power steering fluid 1.6 Brake fluid 1.7 Engine coolant 1.8 Engine oil filter 1.9 Fuel filter 1.10 Air cleaner element 1.11 Feed pump strainer 1.12 Sparkplugs (Gasoline engine) 1.13 Battery 1.14 Air cleaner 1.15 Tire 1.16 Wiper blade 1.17 A/C pollen filter 1.18 Bulb 1.19 Brake pad/brake shoe 1.20 Clutch lining
2. Determining parts and consumables	May include: 2.1 Quantity 2.2 Quality
3. Indirect materials	May include: 3.1 Rags 3.2 Saw dust 3.3 Cleaning fluids 3.4 Sand paper
4. Hazardous parts consumables	May include: 4.1 Batteries 4.2 Used oil 4.3 Used fluids 4.4 Used coolant 4.5 Used parts 4.6 Used oil filter
5. Wastes	May include: 5.1 Contaminated consumables 5.2 Contaminated parts

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Identified parts and consumables 1.2 Retrieved and withdrawn parts and consumables 1.3 Completed work process 1.4 Applied safety practices
2. Resource implications	The following resources should be provided: 2.1 Workplace: Real or simulated work area 2.2 Materials relevant to the activity 2.3 Repair manuals and related reference materials
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Direct observation 3.2 Interview 3.3 Written examination 3.4 Demonstration with oral questioning 3.5 Third party report
4. Context of Assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

UNIT OF COMPETENCY : PREPARE VEHICLE FOR SERVICING AND RELEASING

UNIT CODE : ALT723218

UNIT DESCRIPTOR : This unit covers the knowledge, skills, and attitudes needed in identifying and preparing the vehicle for servicing and releasing.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Receive vehicle	1.1 Vehicle is located following company standard. 1.2 Checklist is validated for exterior and interior items in accordance with ***vehicle checklist***. 1.3 Job Order is checked for proper assignment according to ***work classification***. 1.4 ***Work bay*** for vehicle is designated based from Job Order. 1.5 Vehicle is moved on the designated ***work bay***.	1.1 Identification of basic vehicle components 1.2 Types of defects 1.3 Read & understand Job Order 1.4 Flat rate time 1.5 Use of PPEs 1.6 Adherence to safety procedures 1.7 Vehicle checklist 1.8 Work classification 1.9 Work bay 1.10 Attitudes 1.10.1 Patient 1.10.2 Attention to details 1.10.3 Honest 1.10.4 Time Conscious	1.1 Completing vehicle checklist 1.2 Classifying work to be performed 1.3 Assigning work bay 1.4 Validating checklist for exterior and interior items 1.5 Checking job order for proper assignment 1.6 Identifying vehicle 1.7 Moving vehicle to designated work bay
2. Prepare vehicle for servicing	2.1 ***Protective covers*** are installed prior to servicing based on workshop operating standards. 2.2 Vehicle is positioned and set-up for lifting according to repair order. 2.3 Vehicle is lifted for servicing following manufacturer's manual.	2.1 Familiarization on equipment & facilities 2.2 Time estimation of completion 2.3 Vehicle tagging 2.4 Types of protective covers 2.5 Setting-up of vehicle for lifting 2.6 Read & understand repair order 2.7 Use of PPEs 2.8 Use of safety gears	2.1 Understanding of vehicle status 2.2 Installation of protective covers 2.3 Positioning vehicle 2.4 Operating lifter 2.5 Moving vehicle 2.6 Setting-up vehicle for lifting 2.7 Practicing safety

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	2.4 Safety practices are applied following safety procedures.	2.9 OSHS 2.10 Adherence to safety procedures 2.11Attitudes: 2.11.1 Patient 2.11.2 Attention to details 2.11.3 Honest 2.11.4 Time Conscious	
3. Prepare vehicle for releasing	3.1 Job done is confirmed according to repair order. 3.2 Quality check is done based from repair order. 3.3 Transfer of vehicle to wash bay is coordinated according to SOP. 3.3 Vehicle is endorsed to quality control person following workplace procedure.	3.1 Familiarization of equipment & facilities 3.2 Read & understand repair order 3.3 Confirmation of job done 3.4 Quality standards checking 3.5 Coordination of transferring vehicle 3.6 Endorsement procedures for vehicle 3.7 Attitudes 3.7.1 Patient 3.7.2 Attention to details 3.7.3 Honest 3.7.4 Time Conscious	3.1 Confirming job done 3.2 Performing quality checking 3.3 Coordinating transfer of vehicle to wash bay 3.4 Endorsing and turning-over vehicle

RANGE OF VARIABLES

VARIABLE	RANGE
1. Vehicle checklist	May include: 1.1 External scratches, accessories, items, dents, damages and cracks 1.2 Internal items, scratches, noticeable damages, including spare tire, tools, and loose items 1.3 Standard items that are not present during inspection 1.4 Valuable/personal belongings
2. Work classification	May include: 2.1 Body and Paint repair 2.2 General Job repair 2.3 Periodic maintenance service (PMS)
3. Work bay	May include: 3.1 Service Stall / Working Bay / Workshop areas for servicing/repairing light and/or heavy vehicle and/or plant transmissions and/or outdoor power equipment 3.2 Overhauling Room 3.3 Electrical / Air-con Room 3.4 Inspection Area 3.5 Open workshop/garage and enclosed, ventilated office area
5. Protective covers	May include but not limited to: 5.1 Seat Cover 5.2 Steering Wheel Cover 5.3 Handbrake Cover 5.4 Shift Knob Cover 5.5 Fender Cover 5.6 Paper mat

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Received vehicle 1.2 Prepared vehicle for servicing 1.3 Prepared vehicle for releasing 1.4 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Real or simulated work area 2.2 Appropriate Tools & Equipment 2.3 Materials relevant to the activity 2.4 Manuals and references
3. Method of assessment	Competency may be assessed through: 3.1 Direct observation 3.2 Demonstration with Oral questioning 3.3 Interview 3.4 Written Evaluation 3.5 Third Party Report
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or through accredited institution.

CORE COMPETENCY

UNIT OF COMPETENCY : REMOVE AND STORE VEHICLE BODY COMPONENTS

UNIT CODE : ALT213304

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to perform pre-repair activities by removing and storing vehicle body components. It involves preparing for the task, selecting and using tools, following workplace instructions in removing, tagging and storing body components as part of pre-repair requirements, and completing workplace processes and documentation.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare to remove and store vehicle body components	1.1 ***Job requirements*** are determined from workplace instructions. 1.2 Repair information is sourced and interpreted according to manufacturer's repair manual. 1.3 Hazards associated with the work are identified and risks are managed based on OSHS. 1.4 Standard technician hand tools and personal protective equipment (PPEs), are selected and checked for serviceability. 1.5 Defective and damaged standard technician hand tools are reported following workplace procedures. 1.6 Work is planned according to	1.1 Job requirements 1.2 Workplace hazards 1.3 Use of standard technician hand tools 1.4 OSHS 1.5 Wearing of PPEs 1.6 Workplace procedures 1.7 Attitude: • Patience • Attention to details • Time conscious • Honest • Resourceful	1.1 Determining job requirements 1.2 Sourcing and interpreting repair information 1.3 Identifying hazards associated with the work 1.4 Selecting standard technician hand tools 1.5 Reporting defective and damaged standard technician hand tools 1.6 Locating specifications and relevant information efficiently 1.7 Clarifying instructions and procedures 1.8 Planning own work requirements and prioritize actions

ELEMENT	PERFORMANCE CRITERIA *Italicized terms* are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	workplace procedures. 1.7 Safety practices are applied according to OSHS.		1.9 Selecting and checking standard technician hand 1.10 Applying safety measures
2. Remove, tag and secure body components	2.1 Vehicle body components are removed according to manufacturer's repair manual. 2.2 Components are tagged and stored according to workplace procedures and without causing damage to system or components. 2.3 Additional parts required to complete repair are identified, listed and reported. 2.4 Safety practices are applied following OSHS.	2.1 Automotive body parts 2.1.1 Tagging 2.1.2 Handling 2.2 Workshop procedure: 2.2.1 Accomplishment of checklist 2.3 Procedure in removing body components 2.4 OSHS 2.5 Wearing of PPEs 2.6 Functionality of components 2.7 Attitude: • Patience • Attention to details • Time conscious Honest	2.1 Removing body components 2.2 Checking components' functionality 2.3 Identifying, listing and reporting additional parts required 2.4 Locating specifications and relevant information 2.5 Filling out workplace documentation 2.6 Counting vehicle body components 2.7 Applying safety practices
3. Inspect damaged body components	3.1 Vehicle body components are cleaned according to ***safety and environmental requirements***. 3.2 Vehicle body components are inspected according to workplace procedures 3.3 Damaged body components are reported according to workplace procedures. 3.4 Safety practices are applied following OSHS.	3.1 Cleaning of body components 3.2 Inspection procedure for body components 3.3 Workshop procedure: 3.3.1 Accomplishment of checklist 3.4 OSHS 3.5 Wearing of PPEs 3.6 Waste management 3.7 Attitude: • Patience • Attention to details • Time conscious • Honest • Organized	3.1 Cleaning vehicle body components 3.2 Inspecting vehicle body components 3.3 Reporting damaged body components 3.4 Filling out workplace documentation 3.5 Inspection skills 3.6 Reporting skills 3.7 Applying safety measures
4. Complete work processes	4.1 Final inspection is made based on	4.1 Final inspection procedure	4.1 Filling out workplace documentation

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	workplace procedure. 4.2 Body components are turned-over to immediate superior for quality control following workplace procedure. 4.3 Work area is restored following 5S of good housekeeping. 4.4 Wastes are managed following environmental rules and regulations. 4.5 Standard technician hand tools are checked and stored according to workplace procedures. 4.7 ***Workplace documents*** are accomplished and submitted to immediate superior according to workplace procedures.	4.2 Body component alignment measurement 4.3 Body component clearance 4.4 Checking and storing of tools 4.5 Workshop procedure: 4.5.1 Accomplishment of checklist 4.6 OSHS 4.7 Wearing of PPEs 4.8 5S of Good Housekeeping 4.9 Waste management 4.10 Attitude: • Patience • Attention to details • Time conscious • Honest	4.2 Inspection skills 4.3 Managing wastes 4.4 Accomplishing checklist

RANGE OF VARIABLES

VARIABLE	RANGE
1. Job requirements	May include: 1.1 Remove and store front fender 1.2 Remove and store front and rear door 1.3 Remove and store front and rear bumper 1.4 Remove and store tail gate 1.5 Remove and store hood 1.6 Remove and store trunk lid 1.7 Remove and store back door
2. Safety and environmental requirements	Safety and environmental requirements may include: 2.1 Selecting and using PPE 2.2 Manually handling and storing vehicle body components 2.3 Using tools and equipment 2.4 Environmental requirements, including procedures for storing and disposing of waste materials
3. Workplace documents	May include: 3.1 Repair order 3.2 Inspection form

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Prepared to remove and store vehicle body components 1.2 Removed, tagged and secured body components 1.3 Inspected damaged body components 1.4 Completed work processes 1.5 Demonstrated proper handling techniques of body panels 1.6 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Automotive repair workplace or simulated workplace 2.2 Workplace instructions 2.3 PPEs 2.4 Supplies, tools, materials and equipment needed to demonstrate required tasks 2.5 References and repair manuals 2.6 Training vehicle
3. Method of assessment	Competency in this unit may be assessed through: 3.1 Demonstration with Oral questioning 3.2 Written exam 3.3 Direct Observation
4. Context for assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions

UNIT OF COMPETENCY : **REPLACE AND REPAIR VEHICLE BODY PANELS AND COMPONENTS**

UNIT CODE : **ALT213305**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to remove, repair, and reinstall body panels and components by hammer and dolly, washer welder, and shrinking method.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare to remove, repair, and reinstall vehicle body panels and components	1.1 ***Job requirements*** are determined from workplace instructions 1.2 Vehicle components are inspected for damage and repair according to workplace procedures 1.3 ***Repair methods*** are determined from workplace procedures and vehicle specifications 1.4 Hazards associated with the work are identified and risks are managed according to workplace procedures. 1.5 ***Tools and equipment***, including ***personal protective equipment (PPEs)***, are identified and checked for serviceability 1.6 ***Materials*** are prepared according to workplace procedure	1.1 Job requirements 1.2 Vehicle body panels and components 1.3 Accomplishment of checklist 1.4 PPEs 1.5 Work hazards 1.6 Tools and equipment 1.7 Materials 1.8 Work area 1.9 OSHS 1.10 Wearing of PPEs 1.11 Attitude: • Patience • Attention to details • Time conscious • Honest	1.1 Locating specifications and relevant information. 1.2 Clarifying instructions and procedures 1.3 Planning own work requirements and prioritize actions. 1.4 Determining job requirements 1.5 Inspecting vehicle components 1.6 Determining repair methods 1.7 Identifying work hazards and risks 1.8 Identifying tools and equipment 1.9 Checking tools and equipment serviceability 1.10 Preparing vehicle and work area

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	1.7 Vehicle and work area are prepared according to workplace procedures 1.8 Safety practices are applied following OSHS		
2. Carry out removal, replacement and alignment activities	2.1 ***Materials*** are used according to ***industry criteria***. 2.1 ***Body panels*** and components are removed, tagged, and stored according to ***industry criteria*** 2.2 Body panels and components are replaced according to ***job requirements***. 2.3 Body panels and components are aligned using ***repair methods*** 2.4 Safety practices are applied using OSHS	2.1 Tools, equipment and materials 2.2 Materials 2.3 Removal, replacement, and alignment methods and techniques including: 2.3.1 Measuring panel gaps 2.3.2 Tagging and storing panels and components 2.3.3 Panel sealant and application 2.4 Repair methods: 2.4.1 Using hammer and dolly 2.4.2 Using washer welder 2.4.3 Using shrinking method 2.5 OSHS 2.6 Wearing of PPEs 2.7 Attitude: • Patience • Attention to details • Time conscious • Honest • Organized	2.1 Locating specifications and relevant information 2.2 Filling out workplace documentation 2.3 Clarify instructions and procedures. 2.4 Plan own work requirements and prioritize actions 2.5 Preparing and using materials 2.6 Removing, tagging, and storing body panels and components 2.7 Replacing body panels and components 2.8 Aligning body panels and components 2.9 Applying safety practices
3. Complete work processes	3.1 Final inspection is made to ensure work meets workplace	3.1 Final inspection procedure 3.2 Turn-over of vehicle	3.1 Filling out workplace documentation

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	expectations and vehicle is presented ready for use 3.2 Vehicle and replaced parts are turned-over to immediate superior for quality control following workplace procedure. 3.3 Work area is restored following 5S of good housekeeping. 3.4 Wastes are managed following environmental rules and regulations. 3.5 ***Tools and equipment*** are checked and stored according to workplace procedures 3.6 ***Workplace documents*** are accomplished and submitted to immediate superior according to workplace	3.3 Accomplishment of repair order and other forms 3.3.1 Job done 3.4 OSHS 3.5 Wearing of PPEs 3.6 3Rs 3.7 5S of Good Housekeeping 3.8 Waste management 3.9 Checking and storage of tools and equipment 3.10 Workplace documents 3.11 Attitude: • Patience • Attention to details • Time conscious • Honest	3.2 Conducting final inspection 3.3 Performing vehicle and replaced parts turn-over 3.4 Restoring work area 3.5 Managing wastes 3.6 Checking and storing tools and equipment 3.7 Wearing of PPEs 3.8 Applying safety practices

RANGE OF VARIABLES

VARIABLE	RANGE
1. Job requirements	May include: 1.1 Replace and align front fender 1.2 Replace and align front and rear door 1.3 Replace and align hood 1.4 Replace and align trunk lid 1.5 Replace and align back door 1.6 Replace and align tail gate
2. Tools	May include: 2.1 Standard technician Hand tools 2.2 Spatula 2.3 Hammer 2.4 Dolly 2.5 File dolly 2.6 Spoon 2.7 Measuring instrument
3. Equipment	May include: 3.1 Washer welder 3.2 Body panel stand 3.3 Body panel puller 3.4 Grinder 3.5 Air Compressor 3.6 Heat gun 3.7 Belt sander
4. PPEs	May include: 4.1 Gloves 4.2 Goggles 4.3 Mask 4.4 Safety shoes
5. Materials	May include: 5.1 Sealant 5.2 Washer 5.3 Marker 5.4 Rags
6. Body panels	Includes: 6.1 Front fender 6.2 Front and rear door 6.3 Hood 6.4 Trunk (sedan) 6.5 Back door (SUV, wagon) 6.6 Tail gate (pick-up) 6.7 Quarter panel
7. Industry criteria	May include: 7.1 Manufacturer specifications 7.2 Repair manual

VARIABLE	RANGE
	7.3 Workplace procedures 7.4 Safety and environmental requirements 7.5 Service history
8. Repair method	Includes: 8.1 Hammer and dolly 8.2 Washer welder 8.3 Shrinking method
9. Work documents	May include: 9.1 Repair order 9.2 Job done 9.3 Receiving reports of parts

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate must: 1.1 Prepared to repair, align and reinstall vehicle body panels and components 1.2 Carried out removal, replacement and alignment activities 1.3 Completed work processes 1.4 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Actual or simulated work area 2.2 Appropriate tools 2.3 Materials relevant to the activity 2.4 Repair manuals and related reference materials 2.5 Training vehicle 2.6 PPEs
3. Method of assessment	Competency MUST be assessed through: 3.1 Demonstration with Oral questioning 3.2 Direct observation 3.3 Written examination
4. Context of assessment	4.1 Competency may be assessed individually in the actual workplace or simulation environment in TESDA accredited institutions

UNIT OF COMPETENCY : **REPAIR BODY PANELS USING FILLER (ROUGH FINISH)**

UNIT CODE : **ALT213306**

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to repair body panels using filler. It involves preparing for the task, selecting and using specialist tools and equipment, identifying body filler type and specifications, calculating and mixing body filler and applying it to panels, completing repairs to pre-paint condition and completing workplace documents.

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
1. Prepare to repair body panels using filler	1.1 Job requirements are determined from workplace instructions 1.2 Manufacturer specifications for body filler application and relevant safety data sheets (SDS) are sourced and interpreted. 1.3 ***Materials***, are selected and checked for quality based on manufacturer's specification. 1.4 Hazards associated with the work are identified and risks are managed according to workplace procedures. 1.5 ***Tools and equipment***, including ***personal protective equipment (PPEs)***, are selected and	1.1 Job requirements 1.2 Industry criteria 1.3 Tools, equipment, and materials 1.4 Work hazards 1.5 PPEs 1.6 OSHS 1.7 Degreasing of body panels 1.8 5S of good housekeeping 1.9 Attitude: • Patience • Attention to details • Time conscious • Honest	1.1 Locating specifications and relevant information 1.2 Clarifying instructions 1.3 and procedures 1.4 Determining job requirements 1.5 Sourcing and interpreting manufacturer's specification 1.6 Selecting and checking materials 1.7 Identifying hazards 1.8 Applying safety practices

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
	checked for serviceability. 1.6 Work area is prepared and work is planned to minimize waste and use time efficiently. 1.7 Safety practices are applied following OSHS.		
2. Carry out repair activities using filler	2.1 Paint is removed following ***industry criteria*** 2.2 Damaged ***body panels*** are cleaned using degreaser. 2.3 Body filler is mixed according to manufacturer specifications 2.4 Filler is applied to repaired body panels using ***industry criteria***. 2.5 ***Discrepancies*** in repair are rectified following ***industry criteria***. 2.6 ***Sanding*** is perform following industry criteria 2.6 Repairs are accomplished up to rough finishing following ***industry criteria*** 2.7 Safety practices are applied following OSHS	2.1 Body filler manufacturer specification 2.2 Types of body filler application methods and techniques including: 2.2.1 Preparing surface and removing paint 2.2.2 Mixing and applying body fillers 2.2.3 Correct storage to prevent contamination 2.3 Arithmetic operation 2.4 Ratio and proportion 2.5 Use of tools and equipment 2.6 Repair discrepancies 2.7 Proper sanding method 2.7.1 Wet sanding 2.7.2 Dry sanding 2.8 OSHS 2.9 PPEs	2.1 Using basic mathematical operations including addition, subtraction, multiplication and division 2.2 Calculate body filler quantities and mix required ratios 2.3 Calculating surface area. 2.4 Plan own work requirements and prioritize actions to achieve required outcomes and ensure tasks are completed within workplace time frames 2.5 Identify risk factors and take action to minimize risk 2.6 Degreasing body panels 2.7 Use specialist body repair tools and filler measuring equipment 2.8 Removing paint 2.9 Rectifying damaged panel

ELEMENT	PERFORMANCE CRITERIA ***Italicized terms*** are elaborated in the Range of Variables	REQUIRED KNOWLEDGE	REQUIRED SKILLS
			2.10 Performing pre-paint panel finishing 2.11 Applying filler to repair panels 2.12 Applied safety practices
3. Complete work processes	3.1 Final inspection is made to ensure work meets workplace repair standards and panel is ready for painting. 3.2 Body panel is turned-over to immediate superior for quality control following workplace procedure. 3.3 Work area is restored following 5S of good housekeeping. 3.4 Wastes are managed following environmental rules and regulations. 3.5 ***Tools and equipment*** are checked, reported if faulty, and stored according to workplace procedures 3.6 ***Workplace documents*** are accomplished and submitted to immediate superior according to workplace procedures	3.1 Procedures for final inspection of body filler repair 3.2 Turn-over of component 3.3 Accomplishment of repair order and other forms 3.3.1 Job done 3.4 OSHS 3.5 Wearing of PPEs 3.6 3Rs 3.7 5S 3.8 Waste management 3.9 Checking and storage of tools and equipment 3.10 Workplace documents	3.1 Filling out workplace documentation 3.2 Clearly report issues or outcomes 3.3 Conducting final inspection 3.4 Performing vehicle turn-over 3.5 Restoring work area 3.6 Managing wastes 3.7 Checking and storing tools and equipment 3.8 Wearing of PPEs 3.9 Applying safety practices

RANGE OF VARIABLES

VARIABLE	RANGE
1. Materials	May include: 1.1 Sand paper 1.2 Filler 1.3 Mixing board
2. Tools	May include: 2.1 Spatula 2.2 Ruler
3. Equipment	May include: 3.1 Sander 3.2 Orbital Sander 3.3 Infrared dryer 3.4 Industrial vacuum cleaner
4. PPEs	May include: 4.1 Gloves, solvent resistant 4.2 Respirator mask 4.3 Goggles
5. Industry criteria	May include: 5.1 Manufacturer specifications 5.1.1 Repair manual 5.2 Workplace procedures 5.3 Safety and environmental requirements
6. Body panels	May include but not limited to: 6.1 Fender 6.2 Door panel 6.3 Hood 6.4 Trunk lid 6.5 Side panel 6.6 Roof panel
7. Discrepancies	May include: 7.1 Improper paint removal 7.2 Improper mixing ratio of putty and hardener 7.3 Uneven application of putty 7.4 Improper sanding 7.5 Improper cleaning
8. Sanding	Includes: 8.1 Wet sanding 8.2 Dry sanding
9. Workplace documents	May include: 9.1 Repair order 9.1.1 Job done 9.2 Parts and materials requisition

EVIDENCE GUIDE

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Prepared to repair body panels using filler 1.2 Carried out repair activities using filler 1.3 Completed work processes 1.4 Applied safety practices
2. Resource implications	The following resources MUST be provided: 2.1 Workplace: Actual or simulated work area 2.2 Appropriate tools and equipment 2.3 Materials relevant to the activity 2.4 Repair manuals and related reference materials 2.5 PPEs 2.6 Training vehicle 2.7 Body panels
3. Method of assessment	Competency MUST be assessed through: 3.1 Direct observation 3.2 Written examination 3.3 Demonstration with oral questioning
4. Context of assessment	4.1 Competency may be assessed on the job or simulated environment.

SECTION 3 TRAINING ARRANGEMENTS

These standards are set to provide technical and vocational education and training (TVET) providers with information and other important requirements to consider when designing training programs for **AUTOMOTIVE BODY REPAIRING NC II**.

3.1 CURRICULUM DESIGN

TESDA shall provide the training on the development of competency-based curricula to enable training providers develop their own curricula with the components mentioned below.

Delivery of knowledge requirements for the basic, common and core units of competency specifically in the areas of mathematics, science/technology, communication/language and other academic subjects shall be contextualized. To this end, TVET providers shall develop a Contextual Learning Matrix (CLM) to accompany the curricula.

Course Title: **AUTOMOTIVE BODY REPAIRING NC II** NC Level: **NC II**

Nominal Training Duration:

37	Hours (Basic Competencies)
162	Hours (Common Competencies)
348	Hours (Core Competencies)
547	
348	Supervised Industry Learning (**SIL**)
895	**TOTAL HOURS**

Note: SIL with allowance

Course Description:

This course is designed to enhance the knowledge, skills and attitudes of an individual in the field of automotive servicing in accordance with industry standards. It covers competencies such as removal and storing vehicle body components, replacement and repairing vehicle body panels and components, and repair of vehicle body panels using filler (rough finish).

Upon completion of the course, the learners are expected to demonstrate the above-mentioned competencies to be employed. To obtain this, all units prescribed for this qualification must be achieved.

BASIC COMPETENCIES
37 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration

1. Participate in workplace communication	1.1 Obtain and convey workplace information	• Describe Organizational policies
		• Read:
		  ○ Effective communication
		  ○ Written communication
		  ○ Communication procedures and systems
		• Identify:
		  ○ Different modes of communication
		  ○ Medium of communication
		  ○ Flow of communication
		  ○ Available technology relevant to the enterprise and the individual's work responsibilities
		• Prepare different Types of question
		• Gather different sources of information
		• Apply storage system in establishing workplace information
		• Demonstrate Telephone courtesy
			• Group discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hours

	1.2 Perform duties following workplace instructions	• Read:
		  ○ Written notices and instructions
		  ○ Workplace interactions and procedures
			• Group discussion
			• Lecture
			• Demonstration
				• Oral evaluation
				• Written examination
				• Observation
					2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Read instructions on work related forms/documents • Perform workplace duties scenario following workplace nstructions			
	1.3 Complete relevant work related documents	• Describe Communication procedures and systems • Read: ○ Meeting protocols ○ Nature of workplace meetings ○ Workplace interactions ○ Barriers of communication • Read instructions on work related forms/documents • Practice: ○ Estimate, calculate and record routine workplace measures ○ Basic mathematical processes of addition, subtraction, division and multiplication • Demonstrate office activities in: ○ workplace meetings and discussions scenario • Perform workplace duties scenario following simple written notices • Follow simple spoken language • Identify the different Non-verbal communication	• Group discussion • Lecture • Demonstration • Role play	• Oral evaluation • Written examination • Observation	2 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Demonstrate ability to relate to people of social range in the workplace • Gather and provide information in response to workplace requirements • Complete work related documents			
2. Work in a team environment	2.1 Describe team role and scope	• Discussion on team roles and scope • Participate in the discussion: ○ Definition of Team ○ Difference between team and group ○ Objectives and goals of team • Locate needed information from the different sources of information	• Lecture/ Discussion • Group Work • Individual Work • Role Play	• Role Play • Case Study • Written Test	1 Hour
	2.2 Identify one's role and responsibility within team	• Role play: ○ individual role and responsibility • Role Play ○ Understanding Individual differences • Discussion on gender sensitivity	• Role Play • Lecture/ Discussion	• Role Play • Written Test	1 Hour
	2.3 Work as a team member	• Participate in group planning activities • Role play: Communication protocols • Participate in the discussion of standard work procedures and practices	• Group work • Role Play • Lecture/ Discussion	• Role Play • Written Test	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
3. Solve/address routine problems	3.1 Identify routine problems	• Review of the current industry hardware and software products and services • Identify correctly the industry maintenance, service and helpdesk practices, processes and procedures • Make use of the industry standard diagnostic tools • Share best practices in determining basic malfunctions and resolutions to general problems in the workplace • Analyze routine/procedural problems	• Group discussion • Lecture • Demonstration • Role playing	• Case Formulation • Life Narrative Inquiry (Interview) • Standardized test	1 Hour
	3.2 Look for solutions to routine problems	• Review of the current industry hardware and software products and services • Identify correctly the industry maintenance, service and helpdesk practices, processes and procedures • Make use of the industry standard diagnostic tools • Share best practices in determining basic malfunctions and resolutions to general problems in the workplace • Formulate possible solutions to problems and document procedures for reporting	• Group discussion • Lecture • Demonstration • Role playing	• Case Formulation • Life Narrative Inquiry (Interview) • Standardized test	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	3.3 Recommend solutions to problems	• Discuss standard operating procedures and documentation processes	• Group discussion • Lecture • Demonstration • Role playing	• Case Formulation • Life Narrative Inquiry (Interview) • Standardized test	1 Hour
4. Develop Career and Life Decisions	4.1 Manage one's emotion	• Demonstrate self-management strategies that assist in regulating behavior and achieving personal and learning goals • Explain enablers and barriers in achieving personal and career goals • Identify techniques in handling negative emotions and unpleasant situation in the workplace such as frustration, anger, worry, anxiety, etc. • Manage properly one's emotions and recognize situations that cannot be changed and accept them and remain professional • Recall instances that demonstrate self- discipline, working independently and showing initiative to achieve personal and career goals	• Discussion • Interactive Lecture • Brainstorming • Demonstration • Role-playing	• Demonstration or simulation with oral questioning • Case problems involving workplace diversity issues	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Share experiences that show confidence, and resilience in the face of setbacks and frustrations and other negative emotions and unpleasant situations in the workplace			
	4.2 Develop reflective practice	• Enumerate strategies to improve one's attitude in the workplace • Explain Gibbs' Reflective Cycle/Model (Description, Feelings, Evaluation, Analysis, Conclusion, and Action plan) • Use basic SWOT analysis as self-assessment strategy • Develop reflective practice through realization of limitations, likes/ dislikes; through showing of self-confidence • Demonstrate self-acceptance and being able to accept challenges	• Small Group Discussion • Interactive Lecture • Brainstorming • Demonstration • 5 Role-playing	• Demonstration or simulation with oral questioning • Case problems involving workplace diversity issues	1 Hour
	4.3 Boost self-confidence and develop self-regulation	• Describe the components of self-regulation based on Self-Regulation Theory (SRT) • Explain personality development concepts • Cite self-help concepts (e. g., 7 Habits by Stephen Covey, transactional analysis, psycho-spiritual concepts) • Perform effective communication skills – reading, writing, conversing skills	• Small Group Discussion • Interactive Lecture • Brainstorming • Demonstration • Role-playing	• Demonstration or simulation with oral questioning • Case problems involving workplace diversity issues	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Show affective skills – flexibility, adaptability, etc. • Determine strengths and weaknesses			
5. Contribute to workplace innovation	5.1 Identify opportunities to do things better	• Identify different roles of individuals in contributing to doing things better in the workplace • Appreciate positive impacts and challenges in innovation • Show mastery of the different types of changes and levels of participation in the workplace • Discuss 7 habits of highly effective people	• Interactive Lecture • Appreciative Inquiry • Demonstration • Group work	• Psychological and behavioral Interviews • Performance Evaluation • Life Narrative Inquiry • Review of portfolios of evidence and third-party workplace reports of on-the-job performance. • Standardized assessment of character strengths and virtues applied	1 Hour
	5.2 Discuss and develop ideas with others	• Identify different roles of individuals in contributing to doing things better in the workplace • Appreciate positive impacts and challenges in innovation • Show mastery of the different types of changes and levels of participation in the workplace	• Interactive Lecture • Appreciative Inquiry • Demonstration • Group work	• Psychological and behavioral Interviews • Performance Evaluation • Life Narrative Inquiry	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		• Discuss 7 habits of highly effective people • Communicate ideas through small group discussions and meetings		• Review of portfolios of evidence and third-party workplace reports of on-the-job performance. • Standardized assessment of character strengths and virtues applied	
	5.3 Integrate ideas for change in the workplace	• Identify different roles of individuals in contributing to doing things better in the workplace • Appreciate positive impacts and challenges in innovation • Show mastery of the different types of changes and levels of participation in the workplace • Discuss 7 habits of highly effective people • Communicate ideas through small group discussions and meetings • Demonstrate basic skills in data analysis	• Interactive Lecture • Appreciative Inquiry • Demonstration • Group work	• Psychological and behavioral Interviews • Performance Evaluation • Life Narrative Inquiry • Review of portfolios of evidence and third-party workplace reports of on-the-job performance. • Standardized assessment of character strengths and virtues applied	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
6. Present relevant information	6.1 Gather data/ information	• Lecture and discussion on: - Organisational protocols - Confidentiality and accuracy - Business mathematics and statistics - Legislation, policy and procedures relating to the conduct of evaluations • Reviewing data/ information	• Group discussion • Lecture • Demonstration • Role Play	• Oral evaluation • Written Test • Observation • Presentation	2 Hours
	6.2 Assess gathered data/ information	• Lecture and discussion on: - Data analysis techniques/ procedures - Organisational values, ethics and codes of conduct - Trends and anomalies • Computing business mathematics and statistics • Application of data analysis techniques	• Group discussion • Lecture • Demonstration • Role Play • Practical exercises	• Oral evaluation • Written Test • Observation • Presentation	3 Hours
	6.3 Record and present information	• Lecture and discussion on: - Reporting requirements to a range of audiences - Recommendations for possible improvements • Analysis and comparison of interim and final reports' outcomes • Reporting of data findings	• Group discussion • Lecture • Demonstration • Role Play • Practical exercises	• Oral evaluation • Written Test • Observation • Presentation	3 Hours
7. Practice Occupational Safety And Health Policies And Procedures	7.1 Identify OSH compliance requirements	• Discussion regarding: - Hierarchy of Controls - Hazard Prevention and Controls - Work Standards and Procedures - Personal Protective Equipment	• Lecture • Group Discussion	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	7.2 Prepare OSH requirements for compliance	• Identification of required safety materials, tools and equipment • Handling of safety control resources	• Lecture • Group Discussion	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour
	7.3 Perform tasks in accordance with relevant OSH policies and procedures	• Discussion of General OSH Standards and Principles • Performing industry related work activities in accordance with OSH Standards	• Lecture • Group Discussion	• Written Exam • Demonstration • Observation • Interviews / • Questioning	2 Hours
8. Exercise Efficient and Effective Sustainable Practices in the Workplace	8.1 Identify the efficiency and effectiveness of resource utilization	• Discussion on the process how Environmental Policies coherence is achieved • Discussion on Necessary Skills in response to changing environmental policies needs - Waste Skills - Energy Skills - Water Skills - Building Skills - Transport Skills - Material Skills	• Lecture • Group Discussion • Simulation • Demonstration	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour
	8.2 Determine causes of inefficiency and/or ineffectiveness of resource utilization	• Discussion of Environmental Protection and Resource Efficiency Targets • Analysis on the Relevant Work Procedure	• Lecture • Group Discussion • Demonstration	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
	8.3 Convey inefficient and ineffective environmental practices	• Identification of (re)training needs and usage of environment friendly methods and technologies • Identification of environmental corrective actions • Practicing Environment Awareness	• Lecture • Group Discussion • Role Play • Demonstration	• Written Exam • Demonstration • Observation • Interviews / • Questioning	1 Hour
9. Practice Entrepreneurial Skills in the Workplace	9.1 Apply entrepreneurial workplace best practices	• Case studies on Best entrepreneurial practices • Discussion on Quality procedures and practices • Case studies on Cost consciousness in resource utilization	• Case Study • Lecture/Discussion	• Case Study • Written Test • Interview	1 Hour
	9.2 Communicate entrepreneurial workplace best practices	• Discussion on communicating entrepreneurial workplace best practices	• Lecture/Discussion	• Written Test • Interview	1 Hour
	9.3 Implement cost-effective operations	• Case studies on Preservation, optimization and judicious use of workplace resources	• Case Study • Lecture/Discussion	• Case Study • Written Test • Interview	2 Hours

COMMON COMPETENCIES
<u>162</u> Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
1. Validate vehicle specification	1.1 Check body type of the vehicle	1.1.1 Enumerate the different kinds of vehicle 1.1.2 Explain the difference of each kind of vehicle 1.1.3 Identify the measuring points of the vehicle 1.1.4 Explain the procedures in measuring vehicle dimension and weight 1.1.5 Describe the different body shapes of the vehicle 1.1.6 Differentiate kinds of power train 1.1.7 Explain the function of each power train 1.1.8 Discuss occupational safety and health standard in checking the body type of a vehicle 1.1.9 Identify different kinds of vehicle 1.1.10 Measure vehicle dimensions and weight 1.1.11 Identify vehicle body shapes 1.1.12 Identify vehicle power train 1.1.13 Apply safety practices	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	7 Hours
	1.2 Check vehicle engine type	1.2.1 Discuss the different kinds of engine 1.2.2 Enumerate the different kinds of fuel/energy system	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	3 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		1.2.3 Describe the different engine components 1.2.4 Identify different kinds of engine 1.2.5 Identify different types of fuel/energy system 1.2.6 Identify different engine components			
	1.3 Check vehicle specifications	1.3.1 Inspect VIN plate of the vehicle 1.3.2 Verify vehicle specification 1.3.3 Check vehicle modifications and conversions 1.3.4 Inspect vehicle conversions 1.3.5 Explain different vehicle related regulations in the Philippine	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	4 Hours
	1.4 Complete validation of vehicle specification	1.4.1 Explain verification of vehicle ownership using repair order and vehicle reference materials 1.4.2 Discuss procedures in accomplishing check sheet 1.4.3 Discuss submission of check sheet	• Lecture • Demonstration • Video presentation	• Written exam • Demonstrate	3 Hours
2. Move and position vehicle	2.1 Prepare vehicle for operation	2.1.1 Explain vehicle multi point inspection 2.1.2 Enumerate cockpit drill procedure 2.1.3 Initialize engine startup 2.1.4 Perform parking brake 2.1.5 Show vehicle operational procedures	• Lecture discussion • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	16 hours
	2.2 Position vehicle	2.2.1 Determine workshop hazards	• Lecture • Demonstration	• Demonstration • Written exam	16 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		2.2.2 Discuss the procedure in avoiding workshop hazards 2.2.3 Define occupational health and safety standards 2.2.4 Move the vehicle 2.2.5 Explain workshop rules and regulations	• Video presentation	• Interview	
	2.3 Park and stop the vehicle	2.3.1 Explain parking rules and regulations 2.3.2 Park vehicle 2.3.3 Outline parking principles 2.3.4 Shut-off vehicle	• Lecture • Demonstration • Video presentation	• Demonstration • Written exam • Interview	8 hours
3. Utilize automotive tools	3.1 Prepare automotive tools	3.1.1 Identify and select automotive tools and attachments 3.1.2 Discuss inspection and selection procedures 3.1.3 Describe the defects and damages of automotive tools and attachments 3.1.4 Discuss OSHS in preparation of automotive tools 3.1.5 Prepare automotive tools and attachments	• Lecture • Demonstration • Visual aids • Videos	• Written examination • Interview • Demonstration • Practical examination	6 Hours
	3.2 Use automotive tools	3.2.1 Discuss the procedure in mounting attachments to automotive tools 3.2.2 Discuss the procedure in connecting the power supply to power tools 3.2.3 Discuss the procedure in operating the power tools 3.2.4 Discuss the utilization of hand tools	• Lecture • Demonstration • Visual aids • Videos	• Written examination • Interview • Demonstration • Practical examination	6 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		3.2.5 Identify PPEs 3.2.6 Discuss OSHS in using automotive tools 3.2.7 Use automotive tools 3.2.8 Use PPEs			
	3.3 Maintain automotive tools	3.3.1 Discuss the procedure in cleaning, checking for serviceability, and storing of automotive tools and attachments 3.3.2 Discuss the procedure in identifying and reporting defects and damages 3.3.3 Discuss the proper waste segregation 3.3.4 Demonstrate the proper maintenance of automotive tools 3.3.5 Demonstrate disposal of wastes	• Lecture • Visual aids • Videos	• Written examination • Demonstration	4 Hours
4. Perform mensuration and calculation	4.1 Select measuring instruments	4.1.1 Describe measuring instruments 4.1.2 Select measuring instruments 4.1.3 Inspect and calibrate measuring instruments 4.1.4 Report and return defective measuring instruments 4.1.5 Demonstrate safety practices	• Demonstration • Video presentation • Lecture Discussion • Workshop visit	• Demonstration • Written exam • Oral questioning	9 Hours
	4.2 Carry out measurements and calculation	4.2.1 Explain formulas for volume, areas, perimeters of plane and geometric figures 4.2.2 Explain the procedure in reading tools' limit of accuracy	• Demonstration • Video presentation • Lecture Discussion • Workshop visit	• Demonstration • Written exam • Oral questioning	29 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		4.2.3 Measure required automotive parts 4.2.4 Read tools' limit of accuracy 4.2.5 Inspect and calibrate measuring instruments			
	4.3 Maintain measuring instruments	4.3.1 Identify PPEs 4.3.2 Discuss cleaning procedures of measuring instruments 4.3.3 Enumerate steps in storing instruments 4.3.4 Wear PPEs 4.3.5 Clean measuring instrument tools 4.3.6 Re-inspect and re-calibrate measuring instruments	• Demonstration • Video presentation • Lecture Discussion	• Demonstration • Written exam • Oral questioning	5 Hours
5. Utilize workshop facilities and equipment	5.1 Perform pre-operation activities	5.1.1 Identify different areas of an automotive service facilities 5.1.2 Explain the preparation procedures of automotive service facilities 5.1.3 Enumerate different equipment in the automotive service facilities 5.1.4 Discuss the preparation procedures of equipment 5.1.5 Describe minor repairs in automotive facilities and equipment 5.1.6 Describe defective equipment 5.1.7 Identify reporting procedures for defective equipment	• Lecture • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	9 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		5.1.8 Discuss OSHS practices related to the preparation of facilities and equipment 5.1.9 Prepare workshop facilities and equipment			
	5.2 Use facilities and equipment	5.2.1 Explain the operation of equipment according to operation manual 5.2.2 Describe how facilities are utilized according to workshop procedures 5.2.3 Explain how equipment performance is monitored following users' manual 5.2.4 Describe the monitoring of facilities functionalities following workplace procedures 5.2.5 Discuss how OSHS safety practices are applied	• Lecture • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	5 Hours
	5.3 Conduct post-operation activities	5.3.1 Explain how workshop facilities are restored according to good housekeeping 5.3.2 Discuss tools and equipment are cleaned and stored according to good housekeeping 5.3.3 Explain wastes disposed following waste management procedure and OSHS 5.3.4 Enumerate the safety practices that are applied following OSHS	• Lecture • Demonstration • Video presentation • Workshop visit	• Demonstration • Written exam • Interview	5 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		5.3.5 Demonstrate preparation of report based on workshop standard procedure			
6. Prepare servicing parts and consumables	6.1 Identify parts and consumables	6.1.1 Familiarize parts & consumables 6.1.2 Identify indirect materials 6.1.3 Identify hazardous parts and consumables	• Lecture • Video presentation • Actual training	• Demonstration • Written exam • Interview	6 Hours
	6.2 Retrieve and withdraw parts and consumables	6.2.1 Familiarize requisition slip 6.2.2 Perform parts withdrawal procedure & recording 6.2.3 Validate parts and consumables according to quantity & specification 6.2.4 Perform safety precautions	• Lecture • Video presentation • Actual training	• Demonstration • Written exam • Interview	4 Hours
	6.3 Complete work process	6.3.1 Segregate parts to be returned to customers 6.3.2 Segregate parts & consumables for proper disposal or recycling according to 3Rs and RA 6969 6.3.3 Wear PPE's	• Lecture • Video presentation • Actual training	• Demonstration • Written exam • Interview	3 Hours
7. Prepare vehicle for servicing and releasing	7.1 Receive vehicle	7.1.1 Identify different areas of an automotive service facility 7.1.2 Explain the receiving procedures of automotive service facilities 7.1.3 Explain the check listing procedures of automotive service facilities 7.1.4 Describe minor repairs in automotive facilities and equipment	• Lecture • Demonstration • Video presentation • Workshop visit	• Role-playing • Written exam • Interview	6 Hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodology	Assessment Approach	Nominal Duration
		7.1.5 Discuss OSHS practices related to the preparation of facilities and equipment 7.1.6 Prepare workshop facilities and equipment			
	7.2 Prepare vehicle for servicing	7.2.1 Prepare vehicle for servicing 7.2.2 Explain the preparation procedures of automotive service facilities 7.2.3 Demonstrate the procedure in installing protective covers 7.2.4 Explain the concept of the locator blocks 7.2.5 Classify the type of vehicle repair based on the Repair Order	• Lecture • Demonstration	• Role-playing • Written Exams • Oral Exams	5 Hours
	7.3 Prepare vehicle for releasing	7.3.1 Use the repair order to identify work performed 7.3.2 Apply quality control measures on work done 7.3.3 Operate vehicle for transfer and release	• Lecture • Demonstration	• Role-Playing • Written Exams • Oral Exams	3 Hours

CORE COMPETENCIES
348 Hours

Unit of Competency	Learning Outcome	Learning activities	Methodology	Methods of Assessment	Nominal Duration
1. Remove and store vehicle body components	1.1 Prepare to remove and store vehicle body components	• Discuss the determination of job requirements. • Identify sources of workplace and recommended procedures and specifications. • Explain management of work hazards • Enumerate types and uses of tools and equipment • Identify unserviceable tools and equipment • Discuss planning of work • Prepare to remove and store vehicle body components	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	(35 Hours) 8 Hours
	1.2 Remove, tag and store components	• Discuss procedures on removing of vehicle components • Explain tagging and storage of vehicle components • Enumerate and identify additional parts required for repair completion • Remove, tag and store components	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	8 Hours
	1.3 Clean components prior to repair and storage	• Discuss cleaning of vehicle components including relevant safety and environmental requirements.	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation	16 Hours

Unit of Competency	Learning Outcome	Learning activities	Methodology	Methods of Assessment	Nominal Duration
		• Explain inspection procedures of vehicle components • Enumerate reporting procedures of damaged components • Clean components prior to repair and storage		• Oral questioning	
	1.4 Complete work processes	• Discuss final inspection procedures relating to quality control • Explain turn-over procedures of component • Discuss 5S of Good Housekeeping relating to restoration of work area, cleaning and storage of tools and equipment • Describe waste management • Explain workplace documentation • Complete workplace process	• Lecture-discussion • Demonstration • Video Presentation •	• Written examination • Demonstration • Direct observation • Oral questioning	3 Hours
2. Replace and repair vehicle body panels and components	2.1 Prepare to remove, replace and align bolt-on vehicle body panels and components	• Discuss the determination of job requirements. • Enumeration inspection procedures of vehicle components. • Identify types of damages and respective repairs of vehicle components	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	(139 Hours) 48 Hours

Unit of Competency	Learning Outcome	Learning activities	Methodology	Methods of Assessment	Nominal Duration
		• Identify removal, replacement and alignment methods • Explain management of work hazards • Enumerate types and uses of tools and equipment • Identify unserviceable tools and equipment • Discuss preparation of vehicle and work area • Prepare to remove, replace and align bolt-on vehicle body panels and components			
	2.2 Carry out removal, replacement and alignment activities	• Explain preparation and using materials relevant for the task. • Discuss removal, tagging and storage of body panels and components. • Explain industry criteria • Identify replacing methods for body panels and components. • Discuss the repair methods for aligning body panels and components • Enumerate safety practices relevant to the tasks	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	88 Hours

Unit of Competency	Learning Outcome	Learning activities	Methodology	Methods of Assessment	Nominal Duration
		• Carry out removal, replacement and alignment activities			
	2.3 Complete work processes	• Discuss final inspection procedures relating to quality control • Explain turn-over procedures of component • Discuss 5S of Good Housekeeping relating to restoration of work area, cleaning and storage of tools and equipment • Describe waste management • Explain workplace documentation • Complete workplace process	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	3 Hours
3. Repair vehicle body panels using filler (rough finish)	3.1 Prepare to repair body panels using filler	• Discuss the determination of job requirements. • Identify sources of manufacturer specifications for body filler application and relevant safety data sheets (SDS). • Identify unserviceable tools and equipment	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	(174 Hours) 56Hours

Unit of Competency	Learning Outcome	Learning activities	Methodology	Methods of Assessment	Nominal Duration
		• Explain management of work hazards • Enumerate types and uses of tools, equipment and PPE • Discuss planning of work relating to waste and time management • Prepare to repair body panels using filler			
	3.2 Carry out activities using filler	• Explain industry criteria for removing paint • Discuss rectification of damaged body panels • Describe mixing procedures of body filler • Enumerate steps on filler application • Explain rough finishing • Enumerate safety practices relevant to the tasks • Carry out activities using filler	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	88 Hours
	3.3 Complete work processes	• Explain final inspection pertaining to standards prior to painting • Enumerate turn-over procedures	• Lecture-discussion • Demonstration • Video Presentation	• Written examination • Demonstration • Direct observation • Oral questioning	30 Hours

Unit of Competency	Learning Outcome	Learning activities	Methodology	Methods of Assessment	Nominal Duration
		• Discuss 5 S of Good Housekeeping relating to restoration of workplace • Describe wastes management procedures • Explain environmental rules and regulations • Identify unserviceable tools and equipment • Enumerate reporting of faulty tools and equipment • Describe storage of tools and equipment • Explain workplace documentation • Complete work process of applying filler			

3.2 TRAINING DELIVERY

1. **The delivery of training shall adhere to the design of the curriculum. Delivery shall be guided by the principles of competency-based TVET.**

    a. Course design is based on competency standards set by the industry or recognized industry sector; (Learning system is driven by competencies written to industry standards)
    b. Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies;
    c. Training can be done on an actual workplace setting, simulation of a workplace and/or through adoption of modern technology.
    d. Assessment is based in the collection of evidence of the performance of work to the industry required standards;
    e. Assessment of competency takes the trainee's knowledge and attitude into account but requires evidence of actual performance of the competency as the primary source of evidence.
    f. Training program allows for recognition of prior learning (RPL) or current competencies;
    g. Training completion is based on satisfactory performance of all specified competencies.

2. **The competency-based TVET system recognizes various types of delivery modes, both on-and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities and their variations/components may be adopted singly or in combination with other modalities when designing and delivering training programs:**

    2.1 School/Institution- Based:

    - Dual Training System (DTS)/Dualized Training Program (DTP) which contain both in-school and in-industry training or fieldwork components. Details can be referred to the Implementing Rules and Regulations of the DTS Law and the TESDA Guidelines on the DTP;

    - Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, audio, video, computer technologies or other modern technology that can be used to facilitate learning and formal and non-formal training. Specific guidelines on this mode shall be issued by the TESDA Secretariat.

    - Supervised Industry Training (SIT) or on-the-job training (OJT) is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies as prescribed in the training regulations. It is imperative that the deployment of trainees in the workplace is adhered to training programs agreed by the institution and enterprise and status and progress of trainees

are closely monitored by the training institutions to prevent opportunity for work exploitation.

- The classroom-based or in-center instruction uses of learner-centered methods as well as laboratory or field-work components.

2.2 Enterprise-Based:

- **Formal Apprenticeship** – Training within employment involving a contract between an apprentice and an enterprise on an approved apprenticeable occupation.

- **Informal Apprenticeship** - is based on a training (and working) agreement between an apprentice and a master craftsperson wherein the agreement may be written or oral and the master craftsperson commits to training the apprentice in all the skills relevant to his or her trade over a significant period of time, usually between one and four years, while the apprentice commits to contributing productively to the work of the business. Training is integrated into the production process and apprentices learn by working alongside the experienced craftsperson.

- **Enterprise-based Training**- where training is implemented within the company in accordance with the requirements of the specific company. Specific guidelines on this mode shall be issued by the TESDA Secretariat.

2.3 Community-Based – short term program conducted by non-government organizations (NGOs), LGUs, training centers and other TVET providers which are intended to address the specific needs of a community. Such programs can be conducted in informal settings such as barangay hall, basketball courts, etc. These programs can also be mobile training program (MTP).

3.3 TRAINEE ENTRY REQUIREMENTS

Trainees or students who would like to enroll in this program must possess the following requirements:

- A holder of National Certificate in Automotive Servicing NC I;
- Basic communication skills;
- Basic mathematical skills;

This list does not include specific institutional requirements such as educational attainment, appropriate work experience, and others that may be required of the trainees by the school or training center delivering the TVET program.

Note: National Certification in Automotive Servicing NC I can be obtained through direct assessment applying principle of Recognition of Prior Learning (RPL).

3.4 LIST OF TOOLS, EQUIPMENT, AND MATERIALS

AUTOMOTIVE BODY REPAIRING NC II

Recommended list of tools, equipment and materials for the training of 25 trainees for AUTOMOTIVE BODY REPAIRING NC II.

Up-to-date tools, materials, and equipment of equivalent functions can be used as alternatives. This also applies in consideration of community practices and their availability in the local market.

A. FULL QUALIFICATION

TOOLS	
QTY	**DESCRIPTION**
2 sets	Standard body technician hand tools
5 pcs	Clip removers, small
5 pcs	Clip removers, big
2 pcs	Air Impact Wrench, ½ dr.
1 pc	Horizontal hammer
1 pc	Cross chisel hammer
1 pc	Vertical chisel hammer
5 pcs	Pick hammer
5 pcs	Smoothing Hammer
5 pcs	Rubber mallet
5 pcs	Wooden hammer
5 pcs	Dolly (85x70mm)
5 pcs	Dolly (105x65mm)
5 pcs	Dolly (135x65mm)
5 pcs	File dolly
1 pc	Body spoon
1 set	Hand puller
1 pc	Body line chisel

TOOLS	
QTY	**DESCRIPTION**
5 pcs	Mixing stick, plastic
10 pcs	Putty spatula, plastic
5 pcs	Sanding block, 4”
5 pcs	Sanding block, 5”
5 pcs	Sanding block, 7”
5 pcs	Ruler, stainless steel, 12”
1 pc	Sealant gun

EQUIPMENT	
QTY	**DESCRIPTION**
1 unit	Washer welder, single phase
2 units	Crocodile jack, 1 ton
1 unit	Parts Rack, 4x3x2ft
1 pc	Trolley, 3 layers
4 pcs	Car Stand, adjustable, 1 ton
2 pcs	Trouble light 10m
2 units	Power lock chain w/ stand
1 unit	Single action sander, pneumatic
1 unit	Orbital action sander, pneumatic
1 unit	Dual action sander, pneumatic
1 unit	Infrared dryer
1 unit	Air chuck grinder
1 unit	Air duster gun
2 units	Working table with mounted vise, 2x4ft
1 unit	Air belt sanders, big
1 unit	Air belt sanders, small
5 units	Body panel stand
1 unit	Vacuum cleaner, ½hp
1 unit	Air compressor, 5hp, single phase
1 unit	Digital weighing scale, 1kilo cap.
1 set	Body puller

MATERIALS	
QTY	**DESCRIPTION**
50 pcs	Washer (for Washer welder), 1/4” inner dia. Rod (for Washer welder)
1 can	Anti-rust agent
1 box	Sandpaper #80
1 box	Sandpaper #120
	Surface preparation materials
1 can	Guide coat, 500g
1 box	Sanding disc #80
1 box	Sanding disc #120
4 L	Putty (polytuff)
4 L	Etching primer
4 L	Metal Primer
1 gal.	Degreaser
1 gal.	Washing thinner
5 rolls	Masking tape 1"
5 pcs	Training panel (assorted) Fender panel Door panel Quarter panel Hood Trunk Back door Tail gate Sliding door
1 K	Cotton rags
5 pcs	Putty mixing board, A4 size
5 pcs	Paint brush, 1"
1 tube	Sealant
5 pcs	Steel Brush, ordinary
25 pc	**PPEs** - Face mask - Dust mask - Ear protectors - Face shield* - Goggles - Solvent Resistance Gloves - Rubber Gloves - Coverall suit - Apron - Safety shoes - Gas Mask Respirator - Gas Mask Pre-filter
1 gallon	70% Alcohol*

Note: Access to and use of equipment/facilities can be provided through cooperative arrangements or MOA with other partner/companies. *These materials will be required during the pandemic as mandated by the existing guidelines issued by the government in line with protection against virus and other infectious diseases for trainees and trainers.

3.5 TRAINING FACILITIES

AUTOMOTIVE BODY REPAIRING NC II

The automotive workshop must be made of reinforced concrete or steel structure. The size must be suited on the requirements of the competencies. The class size of 25 students/trainees is reserved for the lecture room and the practical demonstration area for carrying out servicing of minor automotive parts. Most of the learning activities such as on-vehicle servicing is performed in the workshop.

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ. METERS
A. Building (permanent)			**164.00**
Lecture Room	5 x 6	30	30.00
Laboratory/Workshop Area	4 x 7	28.00 x 3	84.00
Tool room & S/M storage area		20	20.00
Learning resource area	5 x 4	20	20.00
Wash area/comfort room (male & female)		10	10.00
TOTAL			**164.00**

NOTE: Access to and use of equipment /facilities can be provided through cooperative arrangements or MOA with other partner- companies/institutions.

3.6 TRAINER'S QUALIFICATIONS FOR AUTOMOTIVE BODY REPAIRING NC II

New Trainer

- Holder of National TVET Trainers Certificate (NTTC) Level 1 in Automotive Body Repairing NC II; and
- Must have at least 2-years industry experience in Automotive Body Repair for the last 4 years

Existing Trainer

- Holder of National TVET Trainers Certificate (NTTC) Level 1 in Automotive Body Repairing NC II; and
- Must have at least 48 hours of industry immersion in automotive painting within the last 2 years (industry training which includes structured training program inclusive of hands-on activities and observation in a workshop, and training certificates with number of hours)

3.7 INSTITUTIONAL ASSESSMENT

Institutional Assessment is gathering of evidences to determine the achievements of the requirements of the qualification to enable the trainer make judgement whether the trainee is competent or not competent.

SECTION 4 ASSESSMENT AND CERTIFICATION ARRANGEMENT

Competency Assessment is the process of collecting evidence and making judgments whether competency has been achieved. The purpose of assessment is to confirm that an individual can perform to the standards expected at the workplace as expressed in relevant competency standards.

The assessment process is based on evidence or information gathered to prove achievement of competencies. The process may be applied to a full qualification or employable unit(s) of competency in partial fulfillment of the requirements of the national qualification.

4.1. NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS

4.1.1 To attain the National Qualification of **AUTOMOTIVE BODY REPAIRING NC II** the candidate must demonstrate competence in all units of competency listed in Section 1. Successful candidates shall be awarded a National Certificate signed by the TESDA Director General.

4.1.2 Assessment shall cover all competencies, with basic and common integrated or assessed concurrently with the core units of competency.

4.1.3 The following are qualified to apply for assessment and certification, as long as they are holders of National Certificate in the amended Automotive Servicing NC I:

4.1.3.1 Graduates of WTR-registered program on Automotive Body Repairing NC II, or graduates of NTR programs or formal/non-formal/informal including enterprise-based training programs related to automotive body repair; or

4.1.3.2 Candidates who gained competencies in implementing automotive body repair or any related field through informal training or previous work experiences for at least two (2) years within the last five (5) years. A Certificate of Employment and Job Description must be provided as proof.

4.1.4. Current holders of National Certificate (NC) in **AUTOMOTIVE BODY REPAIRING NC II** shall have their certificates renewed and converted to the amended TR provided he/she has accumulated at least two (2) years within the last five (5) years work experience, practicing the competencies prescribed in his/her certificate. A Certificate of Employment and Job Description must be provided as proof. He/she must be a holder of National Certificate in the amended Automotive Servicing NC I.

Current holders of National Certificate (NC) in **AUTOMOTIVE BODY REPAIRING NC II** with no work experience of at least two (2) years within the last five (5) years shall have to undergo reassessment in the amended

Training Regulations upon expiration of their Certificate. He/she must be a holder of National Certificate in the amended Automotive Servicing NC I.

4.1.5. Current holders of Certificate of Competency (COC) in **AUTOMOTIVE BODY REPAIRING NC II**, shall undergo reassessment in the amended Training Regulations upon expiration of their Certificate/s. He/she must be a holder of National Certificate in the amended Automotive Servicing NC I.

4.1.6. Recognition of Prior Learning (RPL). Candidates who have gained competencies through informal training, previous work or life experiences may apply for recognition in a particular qualification through competency.

4.1.7. The industry shall determine assessment and certification requirements for each qualification with promulgated Training Regulations. It includes the following:

a. entry requirements for candidates
b. evidence gathering methods
c. qualification requirements of competency assessors
d. specific assessment and certification arrangements as by industry.

4.2. COMPETENCY ASSESSMENT REQUISITE

4.2.1 **Self-Assessment Guide**. The self-assessment guide (SAG) is accomplished by the candidate prior to actual competency assessment. SAG is a pre-assessment tool to help the candidate and the assessor determine what evidence is available, where gaps exist, including readiness for assessment.

This document can:

a) Identify the candidate's skills and knowledge
b) Highlight gaps in candidate's skills and knowledge
c) Provide critical guidance to the assessor and candidate on the evidence that need to be presented
d) Assist the candidate to identify key areas in which practice is needed or additional information or skills that should be gained prior to assessment

4.2.2 **Accredited Assessment Center.** Only Assessment Center accredited by TESDA is authorized to conduct competency assessment. Assessment centers undergo a quality assured procedure for accreditation before they are authorized by TESDA to manage the assessment for National Certification.

4.2.3 **Accredited Competency Assessor**. Only accredited competency assessor is authorized to conduct assessment of competence. Competency assessors undergo a quality assured system of

accreditation procedure before they are authorized by TESDA to assess the competencies of candidates for National Certification.

COMPETENCY MAP
AUTOMOTIVE BODY REPAIRING NC II

ANNEX A

BASIC COMPETENCY

Receive and respond to workplace communication	Participate in workplace communication	Lead workplace communication	Utilize specialized communication skill	Manage and sustain effective communication strategies
Work with others	Work in a team environment	Lead small teams	Develop and lead teams	Manage and sustain high performing teams
Solve/address routine problems	Solve/address general workplace problems	Apply critical thinking and problem solving techniques in the workplace	Perform higher-order thinking processes and apply techniques in the workplace	Evaluate higher order thinking skills and adjust problem solving techniques
Enhance self-management skills	Develop career and life decisions	Work in a diverse environment	Contribute to the practice of social justice in the workplace	Advocate strategic thinking for global citizenship
Support innovation	Contribute to workplace innovation	Propose methods of applying learning and innovation in the organization	Manage innovative work instructions	Incorporate innovation into work procedures
Access and maintain information	Present relevant information	Use information systematically	Manage and evaluate usage of information	Develop systems in managing, and maintaining information
Follow occupational safety and health policies and procedures	Practice occupational safety and health policies and procedures	Evaluate occupational safety and health work practices	Lead in improvement of occupational safety and health program, policies and procedures	Manage implementation of OSH programs in the workplace
Apply environmental work standards	Exercise efficient and effective sustainable practices in the workplace	Evaluate environmental work practices	Lead towards improvement of environmental work programs, policies and procedures	Manage implementation of environmental programs in the workplace
Adopt entrepreneurial mindset in the workplace	Practice entrepreneurial skills in the workplace	Facilitate entrepreneurial skills for micro-small-medium enterprises (MSMEs)	Sustain entrepreneurial skills	Develop and sustain a high-performing enterprise

COMMON COMPETENCY

Apply appropriate sealant/adhesive	Move and position vehicle	Perform mensuration and calculation	Read, interpret and apply specifications and manuals	Perform Periodic Maintenance
Use and apply lubricants/coolants	Perform shop maintenance	Validate vehicle specification	Utilize automotive tools	
Utilize workshop facilities and equipment	Prepare servicing parts and consumables	Prepare vehicle for servicing and releasing	Perform job estimates	
Interpret/ draw technical drawing	Practice health, safety and environment procedures	Inspect technical quality of work	Maintain quality systems	
Provide work skill instructions	Identify and select original automotive parts and products	Read & Interpret Engineering Drawings	Observe Quality Systems	

CORE COMPETENCY

Prepare undamaged surface for painting	Apply and remove masking	Spray solid color paints	Perform polishing	Interpret Technical Manual Specification of Engine Components
Disassemble Engine Block and Sub-Assemblies, Checks Tolerances and Components	Disassemble Engine Sub-Assemblies/Cylinder Heads and Check Components	Carry Out Pre-Repair Operations on Engine Components	Inspect Engine Components and Determine Preferred Action	Carry Out Machining Operations
Set, Operate and monitor Specialized Machines	Use and Maintain Measuring Instrument	Assemble Engine Block and Sub-Assemblies, Check Tolerances and Carry Out Relevant Testing	Assemble Engine/Cylinder Heads, Check Tolerances and Carry Out Relevant Testing Procedures	Prepare Vehicle Body for Repair
Repair Body Panel	Replace Damaged Parts with Pre-Fabricated Parts	Service motorcycle/small engine system	Service Electrical System	Service Chassis
Overhaul Motorcycle/Small Engine	Perform Pearl Color Matching	Spray Three-Stage Pearl or Mica Color Paint	Manufacture and Develop Corebox for Shell Core Sand	Develop and Manufacture Gear, Conveyor Screw And Propeller Patterns
Develop Gravity Die Casting Mold	Operate Melting Furnaces (Non lectric)	Operate Cupola Melting Furnaces	Operate Electric Induction Melting Furnaces	Fettle and Trim Metal Castings/Forgings

Perform Refractory Installation and Repair	Prepare & Mix Sand for Metal Molding and Coremaking	Produce Molds by Hand (Jobbing)	Produce Cores by Hand (Jobbing)	Operate Sand Molding Machines
Operate Sand Core Making Machines	Pour Molten Metal to Molds	Assemble Mechanical Assemblies using Jigs/Fixtures	Mount/Install Brake and Fuel Systems	Mount/Install Power Drive System
Mount/Install Suspension Drive Train	Install/Fit out Trim Parts/ and Assemblies	Perform Final Engine Run	Perform Wheel Alignment Operations	Install/Fit Out Electrical Parts to Engine Assembly
Install/fit Out Electrical Parts and Electronic Units to Body Interior Compartment	Install/Fit Out Electrical Parts and Electronic Units to Dash Instrument Panel	Install/Fit Out Electrical Parts to Exterior and Engine Compartment	Install/Fit Out Audio and Video Systems	Perform Headlight Focus Aiming Operations
Prepare Molds for Composites Production	Prepare Materials for Formulae	Assemble Materials and Equipment for Production	Operate Injection Molding Equipment	Operate Blow Molding Equipment
Monitor Process Operations	Finish Products and Components	Perform Engineering Measurement	Perform Precision Mechanical Measurement	Calibrate Measuring Equipment
Select and Control Inspection Processes and Procedures	Perform Inspection	Perform Basic Statistical Quality Control	Use Improvement Processes in Team Activities	Perform Pre-treatment and Cathodic Electro-deposition Process Operation
Perform Gray Primer (2nd Primer) Application Procedures	Perform Top Coat Application Procedures	Weld and Braze Automotive Body Shell	Perform Tinsmith Operation	Melt Aluminum-Silicon Alloys for Safety Tested Castings
Melt Metals Using Coreless Induction Furnace	Melt Automotive Gray Iron Castings in Cupola	Prepare Sand Mixture for Heavy Casting	Perform Hand Molding To Produce Heavy Castings	Pour Molten Metal to Heavy Castings
Rectify Faults on Installed Electrical Parts to Engine Assembly	Rectify Faults on Installed Electrical Parts and Electronic Units to Body Interior Compartment	Rectify Faults on Installed Electrical Parts and Electronic Units to Dash Instrument Panel	Rectify Faults on Installed Electrical Parts to Exterior and Engine Compartment	Rectify Faults on Installed Audio and Video System to Automotive Vehicle
Conduct Engine Hot Test	Rectify Assembly Faults on Assembled Mechanical Assemblies	Rectify Faults on Mounted/Installed Brake and Fuel System	Rectify Faults on Mounted/Installed Power Drive System	Rectify Faults on Mounted/Installed Suspension Drive Train
Select Heat Treatment Process	Perform Heat Treatment Process	Change Equipment Dies	Prepare and Start Equipment for Production	Produce Injection Molded Products

Produce Blow Molded Products	Apply quality systems	Conduct product and/or process capability studies	Maintain/supervise the application of quality procedures	Select and classify materials and parts for assembly of wiring harness
Perform cutting and stripping of electrical wires	Perform crimping and soldering of terminals	Perform tying, taping and finishing of assembly wires	Use Comparison and Basic Measuring Devices	Measure Components Using Coordinate Measuring Machines
Use Graphical Techniques and Perform Simple Statistical Computations	Machine Parts	Perform Precision Assembly	Perform press machine setting	Perform mechanical shearing operation
Perform mechanical press forming operation	Perform Hand Forging	Perform Hammer Forging	Perform Basic Incidental Heat/Quenching, Tempering and Annealing	Hand Forge Complex Shapes
Hammer Forge Complex Shapes	Perform Drop and Upset Forging	Carry Out Minor Vehicle Maintenance and Servicing	Drive Light Vehicle	Obey and Observe Traffic Rules and Regulations
Implement and Coordinate Accident-Emergency Procedures	Perform Minor Maintenance and Servicing on Vehicles Classified under LTO Restriction Codes 3 up to 5	Perform Pre-and Post Operation Procedures Vehicles Classified under LTO Restriction Codes 3 up to 5	Drive Passenger Bus	Drive Straight Truck
Perform Minor Maintenance and Servicing on Vehicles Classified under LTO Restriction Codes 6 up to 8	Perform Pre-and Post Operation Procedures Vehicles Classified under LTO Restriction Codes 6 up to 8	Observe Road Health and Safety Practices	Drive Articulated Vehicle	Perform pre-delivery inspection
Perform periodic maintenance of automotive engine	Perform periodic maintenance of drive train	Perform periodic maintenance of brake system	Perform periodic maintenance of suspension system	Perform periodic maintenance of steering system
Service Automotive Battery	Service Ignition System	Test and Repair Wiring/Lighting System	Service Starting System	Service Charging System
Service Engine Mechanical System	Service Clutch System	Service Differential and Front Axle	Service Steering System	Service Brake System

Service Suspension System	Perform Underchassis Preventive Maintenance	Overhaul Manual Transmission	Test and Repair Electrical Security System/Components	Service Electronic Engine Management
Overhaul Engines and Associated Components	Service Automatic Transmission	Perform Maintenance Service Check-Up and Repair to Auto AC System	Remove and Replace Automotive Engine and Engine-Related Systems	Service and repair electronically controlled steering systems
Service and repair electronically controlled suspension systems	Repair Instruments and warning systems	Carry out diagnostic procedures	Service Diesel Engine Management System	Service Electronic Body Management System
Service Diesel Fuel Injection System Components	Service Electronic Drive Management System	Service Emission Control System	Service and repair electronically controlled anti-lock braking system	Service and repair electronically operated traction control System
Service and repair electronically operated stability control System	Plan assessment activities and processes	Manage facility and inventory requirements	Estimate complex jobs	Ensure a safe workplace
Implement continuous improvement	Manage people performance	Plan and manage compliance with environmental regulations in a workplace or business	Service manual air-conditioner system	Diagnose and repair manual air-conditioner system
Repair manual air-conditioner compressor magnetic clutch	Diagnose and repair ignition system	Diagnose and repair starting system	Diagnose and repair charging system	Diagnose and repair body electrical system
Remove and store vehicle body components	Replace and repair vehicle body panels and components	Repair vehicle body panels using filler (rough finish)		

GLOSSARY OF TERMS

Alignment methods	Refers to the body alignments methods includes hammer and dolly, washer welder and shrinking method.
Body filler	Something added to augment weight or size or fill space, a composition, especially a semisolid that hardens on drying.
Body panels	Components and parts that make up automobile bodies including accessories.
OSHS	Stands for Occupational Safety and Health Standards, was formulated in 1978 in compliance with the constitutional mandate to safeguard the worker's social and economic well-being as well as his physical safety and health.
PPE	Stands for Personal Protective Equipment, refers to protective clothing, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.
Safety data sheets	A document that summarizes the performance and other technical characteristics of a product, machine, component.
Workplace procedure	pprocedures explain how to perform tasks and duties. A procedure may specify who in the organization is responsible for particular tasks and activities, or how they should carry out their duties.

TRAINING REGULATIONS (TR)
DOCUMENT REVISION HISTORY

Qualification Title: **AUTOMOTIVE BODY REPAIRING NC II**
Qualification Code: **ALTABR220**

Revision No.	Document Types*	Qualification Title	TESDA Board Resolution No./ Date	Deployment Circular (TESDA Circular/ Implementing Guidelines)
00	Document Created	Automotive Body Repairing NC II	TBR No. 2004 - 21/ 12-09-2004	NA
01	Document Amended	Automotive Body Repairing NC II	TBR No. 2020-43/ 10-13-2020	TESDA Circular No. 137 series of 2020

Legend: ***Description Types**
-Document Created
-Document Amended
-Document Superseded

ACKNOWLEDGEMENTS

The Technical Education and Skills Development Authority (TESDA) is particularly grateful for the valuable technical support provided by the following industry stakeholders for the review and development of this Training Regulations. The time and inputs generously given during this undertaking are also highly appreciated and recognized as they made significant contributions to the constitution of this TR.

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